

# Swiss Universities of Applied Sciences UAS



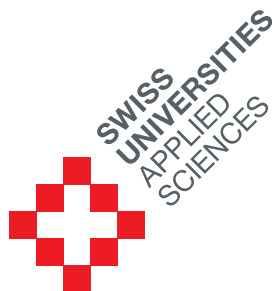
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Swiss Confederation

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## Swiss universities of applied sciences: a success story



Switzerland gives great priority to education, research and innovation and is an appealing location from which to conduct international activities. Swiss education and training programmes specifically meet the needs of the labour market and society, which is one of their main strong points. At higher education level Swiss universities of applied sciences (UAS) combine theory with practice.

Swiss universities of applied sciences offer tertiary A level degree programmes for specific professions and conduct applied research. The first UAS were established in the mid-1990s. They are based on Switzerland's successful dual approach used in upper-secondary level vocational education and training (VET) programmes, namely combining classroom-based instruction with paid apprenticeships in host companies. Around two-thirds of all students coming out of lower-secondary school choose to enrol in such VET programmes. Thanks to the Federal Vocational Baccalaureate and UAS, these VET graduates are able to take their education and training to tertiary A level. And, with implementation of Bologna reforms, UAS now offer Bachelor's and a limited number of Master's degrees.

Within a very short time, universities of applied sciences have become firmly rooted within Switzerland's higher education landscape and they are very popular among both students and employers. Today, Switzerland has seven public UAS (each covering a different region) and two federally approved private UAS. These nine UAS complement Switzerland's internationally renowned higher education system, which is comprised of ten cantonal universities, two federal institutes of technology (ETH in Zurich and EPF in Lausanne) and fourteen universities of teacher education (UTES).

The development and consolidation phase for Swiss universities of applied sciences is now complete. Over the next decade, Swiss UAS will increasingly focus on international activities as well as on joining networks with other higher education institutions. Swiss UAS will establish and maintain contacts abroad as there is growing interest in other countries to know more about Switzerland's successful UAS sector. The present brochure will provide you with an overview of the Swiss UAS system.

# The Swiss education system

Switzerland is a small country with great cultural diversity. Its 7.7 million inhabitants live in an area of about 41,000 km<sup>2</sup>, mostly in urban centres. Switzerland has four national languages: 64% speak German, 20% speak French, 6.5% speak Italian and less than 1% Romansh. The remaining 9% speak another language as their mother tongue. One-fifth of the population holds a foreign passport.

Switzerland lies in the heart of Europe and has excellent international networks. Thanks to bilateral agreements, Switzerland maintains close ties with the EU. Since Switzerland lacks natural resources, it places a premium on education, research and innovation. Switzerland is one of the world's leading economic locations with highly qualified workers and above-average innovation capacities. Switzerland's economy is mainly comprised of small- and medium-sized enterprises (SMEs) but is also home to several multinationals and numerous international organisations.

The strategic position and diverse society have made Switzerland a country that is open to the world. At the same time, it is a country of man-

ageable size, which facilitates cooperation between political, education, research, business and social spheres.

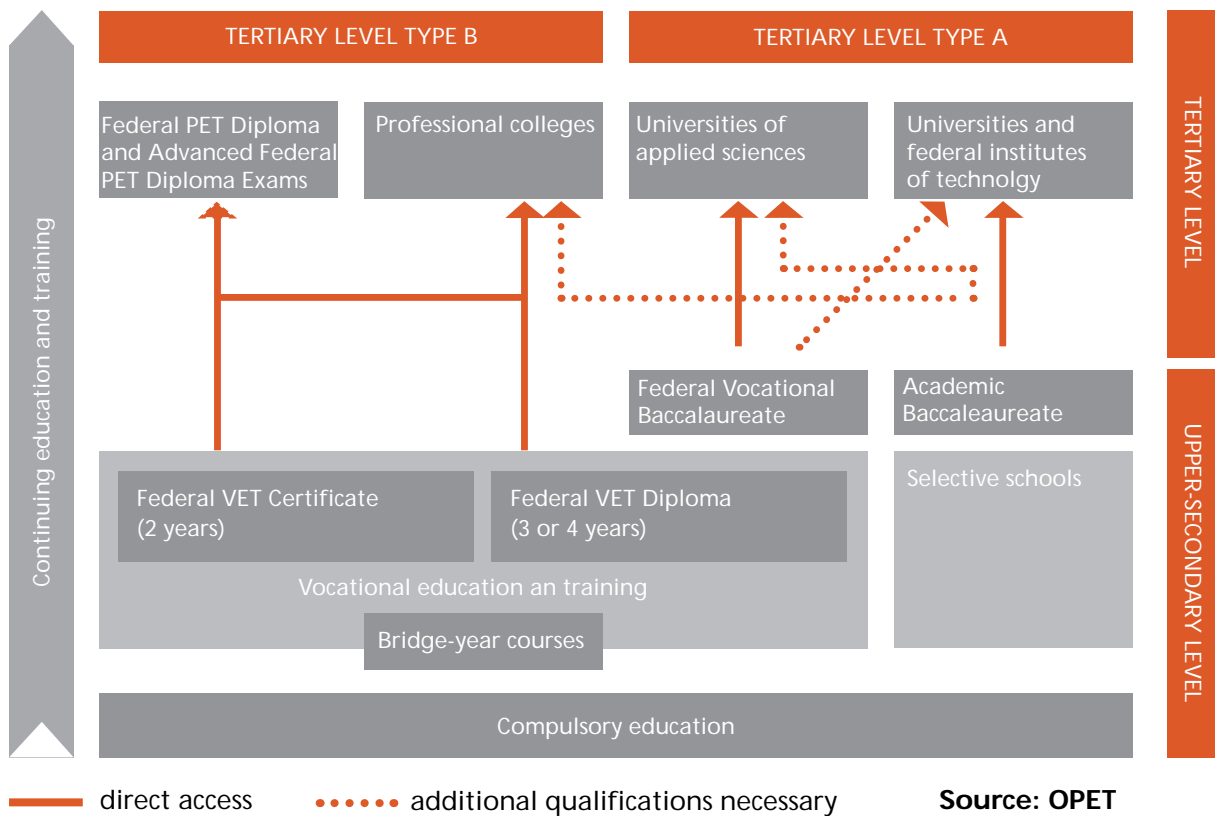
Switzerland has a federal structure comprised of 26 Cantons. Responsibility for education and training is split between the Confederation, the Cantons and communes, with the Cantons bearing most of the responsibility. Essential aspects relating to education and training are coordinated at the national level.

At the federal level, there are two Federal Departments responsible for education and training matters: The Federal Department of Economic Affairs (FDEA), through its Federal Office for Professional Education and Technology (OPET); and the Federal Department of Home Affairs (FDHA), through its State Secretariat for Education and Research (SER). The highest authority responsible for education and training matters at the intercantonal level is the Swiss Conference of Cantonal Ministers of Education (EDK)

## **Different education and training paths**

In Switzerland, compulsory education lasts nine





years and covers primary through lower-secondary school. The Cantons are currently in the process of harmonising the compulsory education sector and intend to expand it by adding a pre-school level (starting from age 4).

After completing compulsory education (i.e. end of lower-secondary school), over 90% of all young people in Switzerland continue their studies at upper-secondary level. There are two equally valid paths open to them: the general education sector and the vocational education and training (VET) sector. The VET sector is comprised of VET schools, which adopt a purely labour market-based focus by preparing students for a chosen occupation. Both the general education sector and the VET sector enable students to enrol in a Swiss higher education institution (i.e. tertiary A level) and students may also change paths at any time along the way. Most students coming out of lower-secondary school opt for the VET sector, especially VET programmes that enable students to study part-time at a VET school and do a paid apprenticeship at a host company. This combined school/work-based (or dual) approach to learning is partly funded by the host companies them-

selves since they are able to obtain a positive cost/benefit ratio. Labour market-oriented VET programmes also ensure lower youth unemployment rates.

The dual approach to learning adopted in the Swiss VET programmes can also be found at tertiary A level (UAS Bachelor's and Master's degree programmes) as well as at tertiary B level where a broad range of professional education and training (PET) programmes are offered by professional colleges (professional college degrees) and private institutions (preparatory courses for Switzerland's two national professional examinations). Both tertiary A and tertiary B levels are open to VET graduates. Switzerland's higher education sector (tertiary A level) is comprised of cantonal universities, federal institutes of technology, universities of applied sciences and universities of teacher education (UTEs). Unlike the other Swiss higher education institutions (HEI), which offer education based on fundamental research and which have a centuries' old tradition, Swiss universities of applied sciences are a new type of HEI in that they focus on practical job-related aspects as well as on applied research.

# Profile and performance mandate of Swiss UAS

UAS are higher education institutions with practical orientation. Their performance mandate includes the following: providing degree programmes; providing continuing education and training; conducting applied research; and rendering services to third parties. The Federal Act of 6 October 1995 on universities of applied sciences (SR 414.71) establishes the profile and mandate of Swiss UAS.

## **Bachelor's and Master's degree programmes**

UAS offer Bachelor's and Master's degree programmes that provide students with practical skills and competencies required for specific professions whether it be applying scientific knowledge and methods to various situations or using artistic or creative abilities. UAS train future professionals, managers and artists. The link between applied research, teaching and practice ensures that study programmes are always kept current with the latest developments.

## **Applied research**

UAS are actively involved in applied research and the transfer of knowledge. UAS applied research activities are conducted mainly for the benefit of small- and medium-sized enterprises (SMEs), providing them with innovative and marketable solutions

## **Continuing education and training (CET) programmes**

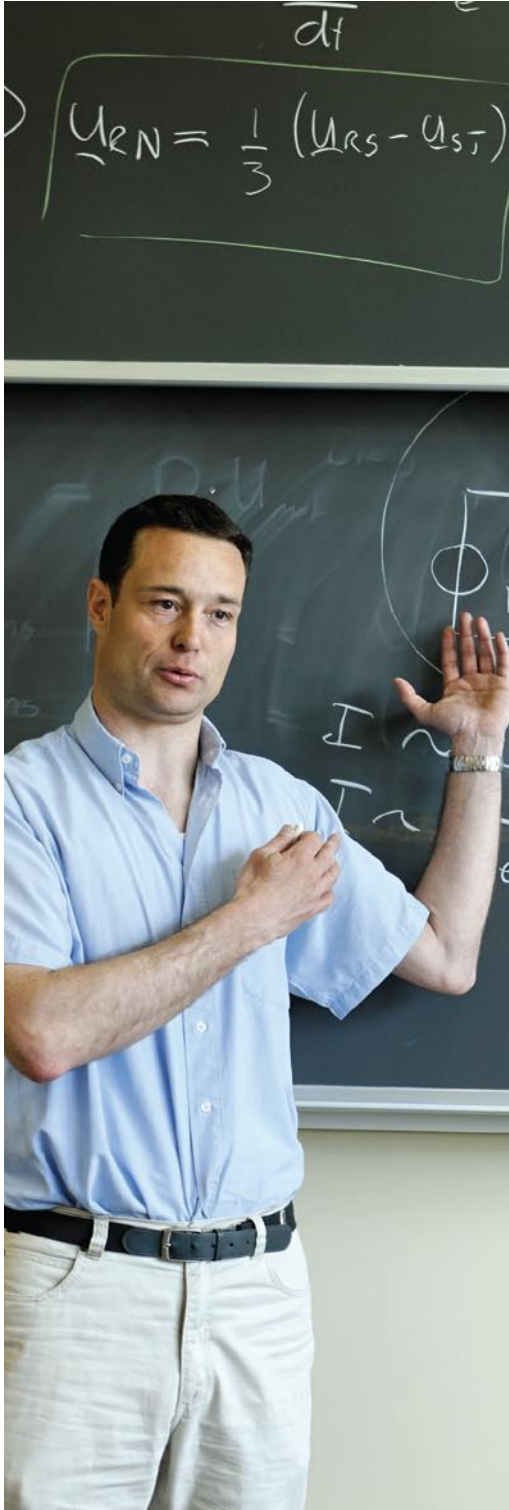
As higher education institutions with a strong labour-market focus, UAS offer a broad range of continuing education and training programmes and courses. Just like the UAS degree programmes, UAS CET programmes and courses are carefully crafted to suit the needs of the labour market.

## **Services**

UAS offer their services and facilities to both the private sector – particularly SMEs – and the public sector.



## Milestones in the development of the Swiss UAS sector



- 1990 Local and regional professional colleges
- 1994 Federal Vocational Baccalaureate (FVB) is introduced as a complementary academic qualification to the standard Federal VET Diploma. By also obtaining the FVB, VET graduates secure the option of enrolling in a higher education institution (specifically, a UAS).
- 1995 First Federal Act on Universities of Applied Sciences comes into effect.
- 1998 Around 50 professional colleges are merged to form seven regional UAS.
- 1999 Switzerland becomes one of the first countries to sign the Bologna Declaration.
- 2003 Federal Council confers unlimited approval upon the seven regional UAS.
- 2005 In addition to UAS degree programmes in engineering, business and design, the Confederation is given authority over UAS degree programmes in the fields of health, social work and art which were previously regulated by the Cantons.
- 2005 A new accreditation system for UAS is introduced.
- 2005 UAS Bachelor's degree programmes replace previous UAS degree programmes.
- 2005 Federal Council approves Switzerland's first private UAS.
- 2006 Swiss voters adopt new constitutional articles on education requiring the Confederation and the Cantons to work together to maintain high quality within the higher education sector.
- 2007 Federal Council approves Switzerland's second private UAS.
- 2007 Switzerland achieves full-fledged participation in EU research framework programmes.
- 2008 UAS introduce a limited number of Master's degree programmes
- 2010 Switzerland signs bilateral agreement to officially take part in EU education programmes.

## Swiss UAS sector



### Recognised UAS

The Swiss UAS sector is comprised of seven public UAS and two private UAS. The Federal Council granted approval to the public UAS in 1998. Public UAS are run by one or more Cantons, which provide around two-thirds of their funding. The remaining one-third of funding comes from the Confederation. The Federal Council granted approval to Switzerland's first private UAS (Kalaidos) in 2005 and to the second one (Les Roches-Gruyère) in 2007. These private UAS are required to meet the same requirements as public UAS but do not receive public subsidies.

Education institutions must obtain approval from the Federal Council in order to use the name "university of applied sciences". All UAS are federally accredited as are their degree programmes. The Federal Department of Economic Affairs (FDEA) is responsible for accrediting UAS as institutions as well as all UAS degree programmes. The accreditation process is designed to ensure the quality, comparability and transparency of UAS degree programmes. The FDEA may delegate accreditation responsibilities to accreditation agencies.

Name of UAS (Actual title and English equivalent)	Campuses	Address / Web site
<p>Berne University of Applied Sciences (Berner Fachhochschule)</p>  <p><b>Bern University of Applied Sciences</b></p>	<p>Berne, Burgdorf, Biel, Zollikofen, Magglingen</p>	<p>Berner Fachhochschule Hallerstrasse 10, 3012 Bern Telefon +41 (0)31 848 33 00, Fax +41 (0)31 848 33 03 www.bfh.ch, office@bfh.ch</p>
<p>University of Applied Sciences of Northwestern Switzerland (Fachhochschule Nordwestschweiz)</p>  <p><b>University of Applied Sciences Northwestern Switzerland</b></p>	<p>Brugg / Windisch, Olten, Basel, Mutten</p>	<p>Fachhochschule Nordwestschweiz Schulthess-Allee 1, 5201 Brugg Tel. +41 (0)56 462 49 11 www.fhnw.ch</p>
<p>University of Applied Sciences of Eastern Switzerland (Fachhochschule Ostschweiz)</p>  <p><b>University of Applied Sciences of Eastern Switzerland</b></p>	<p>St. Gallen, Rapperswil, Buchs, Chur</p>	<p>Fachhochschule Ostschweiz Direktion, Bogenstrasse 7, 9000 St. Gallen Tel. +41 (0)71 280 83 83, Fax +41 (0)71 280 83 89 www.fho.ch, info@fho.ch</p>
<p>Lucerne University of Applied Sciences and Arts (Fachhochschule Zentralschweiz)</p>  <p><b>HOCHSCHULE LUZERN</b></p>	<p>Lucerne, Horw</p>	<p>Hochschule Luzern Frankenstrasse 9, Postfach 2858, 6002 Luzern Tel. +41 (0)41 228 42 42, Fax +41 (0)41 228 42 43 www.hslu.ch, info@hslu.ch</p>
<p>University of Applied Sciences of Zurich (Zürcher Fachhochschule)</p>  <p><b>ZÜRCHER FACHHOCHSCHULE</b></p>	<p>Zurich, Winterthur, Wädenswil</p>	<p>Zürcher Fachhochschule Sekretariat Walcheter, 8090 Zürich Tel. +41 (0)43 259 23 31, Fax +41 (0)43 259 51 61 www.zfh.ch, info@zfh.ch</p>
<p>Kalaidos University of Applied Sciences (Kalaidos Fachhochschule)</p>  <p><b>Kalaidos University of Applied Sciences Switzerland</b></p> <p>The University for Working Professionals.</p>	<p>Basel, Berne, St. Gallen, Zurich</p>	<p>Kalaidos Fachhochschule Hohlstrasse 535, 8048 Zürich Tel. +41 (0)44 200 19 19, Fax +41 (0)44 200 19 15 www.kalaidos-fh.ch, info@kalaidos-fh.ch</p>
<p>University of Applied Sciences of Southern Switzerland (Scuola Universitaria Professionale della Svizzera Italiana)</p>	<p>Lugano, Manno, Canobbio, Verscio</p>	<p>Scuola universitaria professionale della Svizzera italiana Le Gerre, 6928 Manno Tel. +41 (0)58 666 60 00, Fax +41 (0)58 666 60 01 www.supsi.ch, info@supsi.ch</p>
<p>University of Applied Sciences of Western Switzerland (Haute Ecole Spécialisée de la Suisse Occidentale)</p>  <p><b>Hes·so</b> Haute Ecole Spécialisée de Suisse occidentale University of Applied Sciences Western Switzerland</p>	<p>Geneva, Lausanne, Sion, Sierre, Fribourg, Neuchâtel, Yverdon-les-Bains, Changins, La Chaux-de-Fonds</p>	<p>Secrétariat HES-SO Rue de la Jeunesse 1, Case postale 452, 2800 Delémont Tel. +41 (0)32 424 49 00, Fax +41 (0)32 424 49 01 www.hes-so.ch, info@hes-so.ch</p>
<p>University of Applied Sciences Les Roches Gruyère</p>  <p><b>LES ROCHES-GRUYÈRE UNIVERSITY OF APPLIED SCIENCES</b></p>	<p>Bluche, Bulle</p>	<p>University of Applied Sciences Les Roches Gruyère, 1630 Bulle www.lrguas.ch, info@lrguas.ch</p>

# UAS studies

## Broad range of degree programmes

With over 300 Bachelor's and Master's degree programmes in the fields of engineering, business, design, health, social work and art, Swiss universities of applied sciences offer a broad range of studies. The most important qualification is the UAS Bachelor's degree, which enables holders to directly enter the labour market.

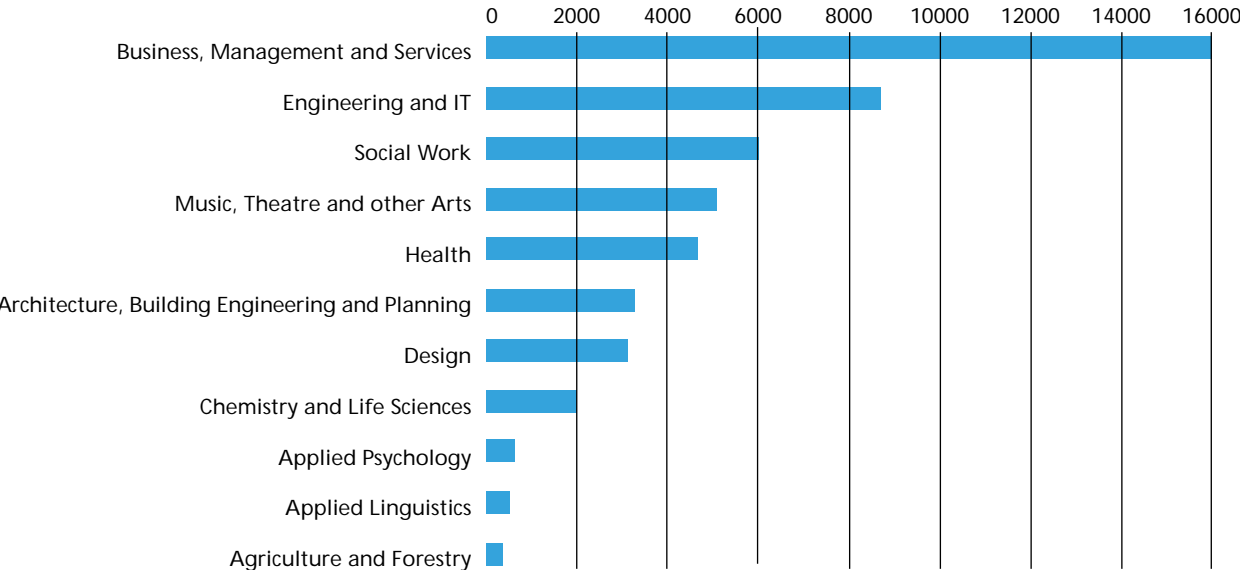
UAS studies are interesting, job-specific and interdisciplinary. Good faculty-student ratios and the close correlation between theory and practice are among the strong points of UAS studies. As labour market-oriented higher education institutions, UAS train professionals that are in demand such as engineers, architects, designers, caregivers and social workers. Future artists also receive their training at UAS whether it be in the performing arts (music, dance, theatre, etc.), cinema or literature.

UAS studies are based on the two-tiered Bachelor-Master structure. The first tier, leading to

the Bachelor's degree, provides students with the skills and competencies needed to carry out a specific profession. UAS Bachelor's degree programmes last three years and cover 180 ECTS. As the second tier, UAS Master's degree programmes provide more in-depth and specialised expertise and last between one and a half years to two years (90 to 120 ECTS). Most students look for employment immediately after obtaining their UAS Bachelor's degree. A small proportion of students enrol in a UAS Master's degree programme, which focuses more on applied research.

At the continuing education and training (CET) level, UAS offer many different courses of varying length, from brief refresher courses to more complete CET programmes leading to the Certificate of Advanced Studies (CAS), the Diploma of Advanced Studies (DAS) and the Master of Advanced Studies (MAS). The Master of Advanced Studies (MAS) corresponds to one year of studies (60 ECTS).

## Number of UAS Students and Fields of Study (2009/2010)





### **Internationally recognised qualifications**

UAS studies lead to the issuance of federally and internationally recognised qualifications.

Degree programmes:

- Bachelor of Arts (BA) und Bachelor of Science (BSc, first tier)
- Master of Arts (MA) und Master of Science (MSc, second tier)

CET programmes:

- Master of Advanced Studies (MAS)
- Executive Master of Business Administration (EMBA)

### **Studies in Switzerland?**

Holders of foreign qualifications who wish to enrol in a Swiss UAS may obtain useful information in the brochure entitled "Studying in Switzerland. Universities of Applied Sciences. 2009", published by the Rectors' Conference of the Swiss Universities of Applied Sciences (KFH). Download: [www.kfh.ch](http://www.kfh.ch)

### **UAS admission**

UAS place major emphasis on skills and competencies that reflect the actual needs of the profession. The traditional path to enrolment in a Swiss UAS Bachelor's degree programme is therefore completion of an upper-secondary level VET programme leading to issuance of both the Federal VET Diploma (labour market qualification) and the Federal Vocational Baccalaureate (academic qualification). Alternatively, prospective UAS students may be holders of a Swiss Academic Baccalaureate and have one year of professional experience. Admission to a Swiss UAS Master's degree programme is open to holders of a UAS Bachelor's degree or any other equivalent degree from a higher education institution. Each UAS is free to decide whether holders of foreign qualifications match the prerequisites for admission.

# Bridging



## Education as an economic factor

Switzerland is among the most innovative and competitive countries in Europe. It regularly features among the top countries in international comparisons whether it be in terms of innovative capacity, research excellence, the quality of its higher education institutions or the performance of its VET/PET sector.

Switzerland relies on UAS graduates and knowledge transfer from UAS, among other things, to maintain its innovative capacity. UAS produce highly qualified workers by combining theory and scientific method with the practical aspects of each profession. UAS teaching and research staff is comprised of individuals who have experience working in the given profession. This ensures that practical knowledge and skills are kept current and that there is a constant feedback loop between research and economic activities.

## Applied research at UAS

Swiss companies are mainly able to compete on world markets on the merits of high-quality, specialised products and services. More funding

is therefore devoted to research and development in Switzerland than in most other countries.

For both the private sector and public sector, Swiss UAS are competent research partners. UAS are specialised in conducting applied research activities, which can benefit SMEs in particular. Applied research activities conducted at UAS facilities focus on finding rapidly deployable solutions to economic or social issues. Through their applied research, UAS play an important role in the innovation process.

UAS have expanded their applied research activities both quantitatively and qualitatively in a very short time. Currently, the development of UAS Master's degree programmes leads to renewed emphasis on research competencies. Research cooperation between UAS and businesses is mainly being encouraged by the Innovation Promotion Agency (CTI). UAS may also apply for grant funding from the Swiss National Science Foundation (SNSF) and the European Union (e.g. EUREKA projects).

## International activities

### International focus of UAS

Swiss higher education institutions are part of a global network of education and research institutions. In an effort to prepare for the next generation of qualified workers in science and business, Switzerland is recruiting talented people from other countries who are drawn to Switzerland's advantageous conditions.

Since their inception, Swiss UAS have also adopted an international focus. For many years, they have been involved in international cooperation activities with higher education institutions in neighbouring countries. They have also taken part in the EU's Erasmus exchange programme, which encourages student mobility. Nowadays, UAS have established teaching and research cooperation agreements with part-

ner HEIs on all continents and are increasingly opening up to a foreign public. English is becoming more popular and Swiss UAS currently offer twenty Bachelor's or Master's degree programmes in English.

With roughly 20% of their staff and 16% of their student body from other countries, Swiss UAS are now international although these proportions are considerably lower than the ones found at cantonal universities and Switzerland's federal institutes of technology. Foreign students at Swiss UAS most often enrol in degree programmes in artistic fields or in one of the new UAS Master's degree programmes. The international activities of UAS are expected to increase even more over the next few years.



# Good prospects

Switzerland is a productive country with a high level of employment. This is made possible thanks to the combination of upper-secondary level VET and tertiary A level UAS programmes, which meet the needs of the economy and society. The VET path therefore offers the best employment prospects.

The return on investment in education and training for UAS graduates is above-average. Comparisons between UAS graduates and graduates of other Swiss higher education institutions show that UAS graduates are less likely to be unemployed and tend to find the transition from school-to-work much easier. UAS graduates generally earn high starting salaries and are sought after among employers because they already have the specific skills and competencies needed for the job. Moreover, UAS graduates have better chances of obtaining a managerial position and a permanent contract than graduates of other HEIs. One year after graduation, 97% of all UAS graduates have found a job. Potential employers of UAS graduates include SMEs, public institutions and large-sized corporations. Major economic branches in Switzerland such as pharmaceuticals, banking, engineering, watchmaking, etc. employ qualified graduates of Swiss VET and UAS programmes.

## Lifelong learning

Lifelong learning is the key to a successful career. Continuing education and training (CET) together with permeability in all directions

within the education system are therefore decisive factors. The Swiss education system has been designed in such a way as to make it easier for students to switch from one type of HEI to another (e.g. from cantonal university to UAS and vice versa). In addition, internationally recognised Bachelor's and Master's degrees provide students with greater mobility and improve comparability between qualifications.

## Future developments

Reform of the UAS sector was one of Switzerland's most important and successful education reforms in recent history. Switzerland managed to create an entirely new type of HEI, consolidate UAS campuses, establish priorities and absorb steadily increasing numbers of students.

Current challenges for UAS include developing both national and international networks, positioning of the UAS in Switzerland's higher education landscape and in an international context and expanding applied research activities. At the national level, a Federal Act to revise Switzerland's higher education sector is currently in the pipeline. With a new Federal Act, all HEIs (cantonal universities, federal institutes of technology, universities of applied sciences, universities of teacher education) will be brought under a single roof and co-managed by both the Confederation and the Cantons. It is important that with their specific profile and emphasis on practical training, UAS will also find their place within the new higher education sector.

## UAS Facts and Figures

9 UAS  
7 public, 2 private

Total of 57,000 students  
80% enrolled in Bachelor's degree programme  
8% enrolled in Master's degree programme  
10% enrolled in continuing education and training  
44% female students  
16% foreign students

9,300 jobs (FTEs) (2008)

Total budget: CHF 1.8 billion  
Allocation of budget funding:  
68% for Bachelor's and Master's degree programmes  
19% for applied research  
7% for continuing education and training  
6% for services to third parties  
Source of budget funding:  
Cantons (54%), Confederation (24%), Private (22%)

**Source:**  
**Federal Statistical**  
**Office (FSO)**  
**2009/2010**



## Additional information

Federal Office for Professional Education and Technology (OPET)  
[www.bbt.admin.ch](http://www.bbt.admin.ch)

Rectors' Conference of the Swiss Universities of Applied Sciences (KFH)  
[www.kfh.ch](http://www.kfh.ch)

Federal Statistical Office (FSO)  
[www.education-stat.admin.ch](http://www.education-stat.admin.ch)

Swiss Conference of Cantonal Ministers of Education (EDK)  
[www.edk.ch](http://www.edk.ch)

Portal for occupational, educational and career guidance  
[www.berufsberatung.ch](http://www.berufsberatung.ch)

Swiss Education Server  
[www.educa.ch](http://www.educa.ch)

Portal on Switzerland  
[www.swissworld.org](http://www.swissworld.org)

Swiss ENIC  
[www.crus.ch](http://www.crus.ch)

Swiss Consulates and Embassies  
[www.eda.admin.ch/eda/en/home/rep.html](http://www.eda.admin.ch/eda/en/home/rep.html)