



# HES - SO

A NETWORK OF SKILLS  
AND COMPETENCES



**Hes·so**

Haute Ecole Spécialisée  
de Suisse occidentale

Fachhochschule Westschweiz

University of Applied Sciences and Arts  
Western Switzerland

# Colourful and Close

‘C

olourful’ is an adjective that I often use when I’m asked to describe the HES-SO.

It conjures up the nuances of the different cantons, of our university buildings and, of course, the specific colours of our six Faculties – Art & Design, Business, Management and Services, Engineering and Architecture, Music and Performing Arts, Health Sciences and Social Work. The second word that comes to mind is ‘close’ – we are close to our students, first and foremost. We strive to remain accessible to the general public and we are deeply embedded, economically and culturally, in the regions of Switzerland.

This brochure seeks to offer an overview of our University, and its degrees and operations. It also provides insight into our core values. Central to our mission is student success. We do our utmost to help our students find their place in society. Our courses are oriented towards professional skills from the Bachelor’s level upwards.

The HES-SO is also special as it is organised on an intercantonal basis. We are a melting pot of different cultures and histories, and this is definitely one of our strengths. We combine this with fields of studies that are very different from one another and this promotes an interdisciplinary approach, both in teaching and research. Can artists and engineers actually speak to each other? In my experience, once people get to know each other, they learn to understand each other. This is much clear from a number of HES-SO projects, including for example our



Innokick Master, which was launched last year to allow students of Management, Engineering and Design to acquire the skills they need to develop innovative products.

Finally, I would like to point out that the HES-SO symbolises a form of success that Switzerland can be truly proud of – dual education system. Our University offers immense scope for young people who choose to take this track. I hope you enjoy reading this brochure about the HES-SO. ■

**Luciana Vaccaro,**  
Rector of the HES-SO

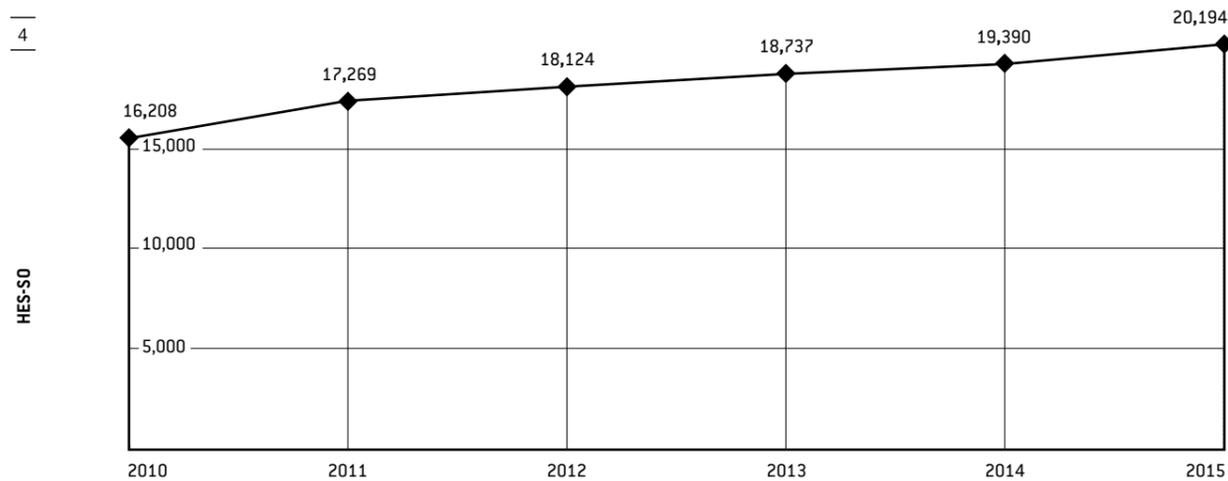
Photograph of ‘Full Turn,’ invented by Benjamin Muzzin, ECAL Award Winner 2013.

A former student of ECAL has invented this innovative device: two screens placed back to back spinning at tremendous speed. The spectator sees holographic 3-D images.

# HES-SO in numbers

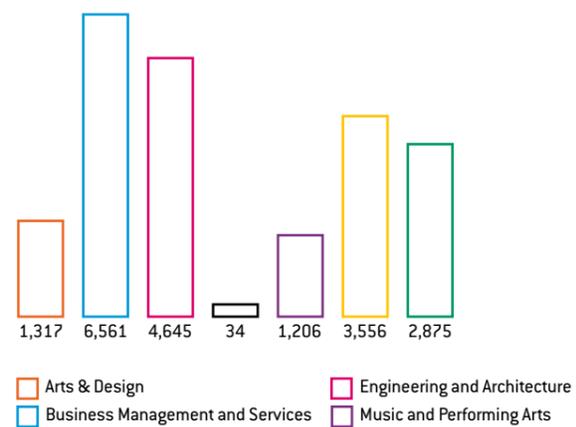
# Courses where experience matters

Growth in the number of HES-SO students



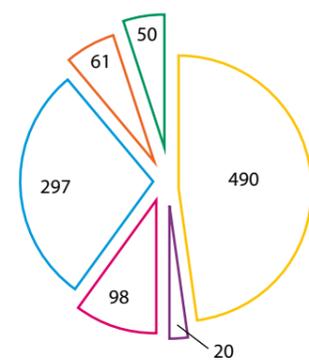
Breakdown of students by discipline

(Federal Statistics Office reporting)



Breakdown of OUT exchanges by discipline

(HES-SO students studying abroad, including mobility)



## Employability\*

The employability rate of students one year after graduating with a Bachelor's degree

**96.4%**

The employability rate of students one year after graduating with a Master's degree

**95.8%**

\*Data Source: Swiss Federal Statistical Office

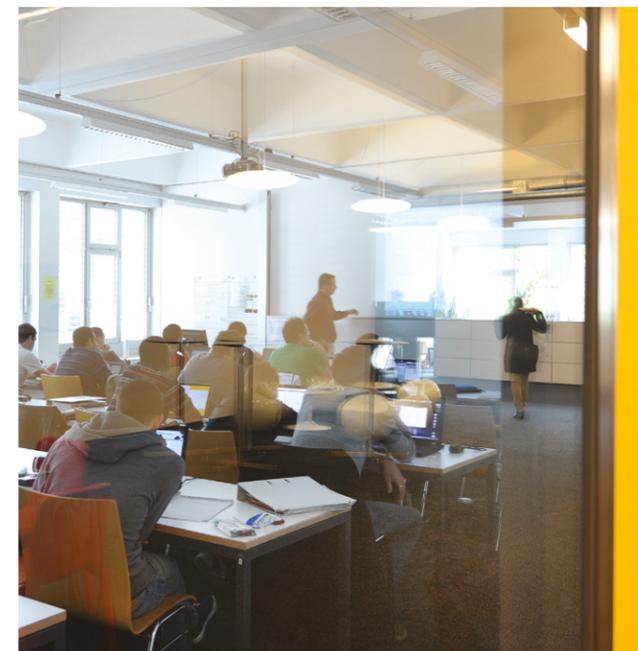
‘THE RESEARCH CONDUCTED IN OUR DIFFERENT SCHOOLS FEEDS INTO OUR TEACHING.’

Professionally oriented higher education is the main asset of HES-SO degree courses. Starting at the Bachelor's degree level, students acquire key skills that will prepare them well for their professional lives. Yves Rey, Vice-Rector of Teaching, outlines some of the specific features of our schools at the regional level: 'Most teaching is delivered in French but some courses also use English. Bilingual French-German courses are also available in Fribourg and the Valais region.'

Students can also choose to study part-time and while working,' adds the Vice-Rector. This possibility is offered in degree courses in Business, Management and Services, Engineering and Architecture as well as Social Work. Our three-year Bachelor's courses aim to increasingly expose students to the real-life professional world, and therefore they include periods of practical training, particularly in Health Sciences and Social Work.

Not only does HES-SO offer Bachelor's degree courses and a variety of Master's courses to the 20,000 students who have enrolled in all its faculties, it also offers continuing education courses and professional development, such as the MAS (Master of Advanced Studies), the EMBA (Executive Master of Business Administration), the DAS (Diploma of Advanced Studies) and the CAS (Certificate of Advanced Studies), delivered in the Schools' fields of study. It has also set up Summer Schools.

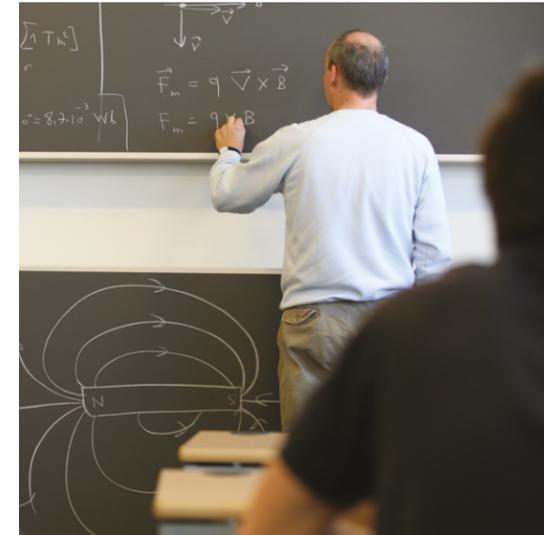
'Teaching within the HES-SO network is now finally able to draw on the applied research conducted in the different Schools. Our lecturers' research projects feed into their courses, with both teaching and research mutually supporting each other,' adds Yves Rey. ■



## Deserving your trust

Ensuring quality in an institution as complex as the HES-SO, with 28 individual Schools, six Faculties, more than five regions and a rectorate, requires considerable thought. 'The real challenge is to find a system which suits each individual School and its way of operating, without imposing regulations or standards,' says Denis Berthiaume, Vice-Rector of Quality at the HES-SO. 'What we must do, for example, is include self-evaluation and regular reports in curriculum monitoring. Our Rectorate hopes to achieve these objectives within two years. We are on the right path.'

Since June 2014, the HES-SO Rectorate has been working to introduce procedures to assess and improve the quality of the core missions of its Schools, namely teaching, applied research and service provision (collaboration with companies and organisations). This initiative will lead to the submission, in autumn 2017, of a request for institutional accreditation to the Swiss Accreditation Council.



Academic quality is a key indicator for stakeholders such as cantons, the Swiss Confederation and the funding bodies which support university research. It is also important for the students, their parents and those who employ our graduates. Such a quality assurance system shows that the HES-SO has complied with national and European standards for higher education. It also increases transparency around the institution's activities and boosts stakeholder confidence.

The requirement places Swiss, European and international universities on equal footing. 'It will help us work in collaboration with other higher education institutions particularly in the fields of training and applied research,' says Denis Berthiaume. ■

'THE REAL CHALLENGE IS TO FIND A QUALITY SYSTEM WHICH SUITS EACH INDIVIDUAL SCHOOLS AND HOW IT OPERATES'

## 'HES-SO applied research often leads to unexpected discoveries'

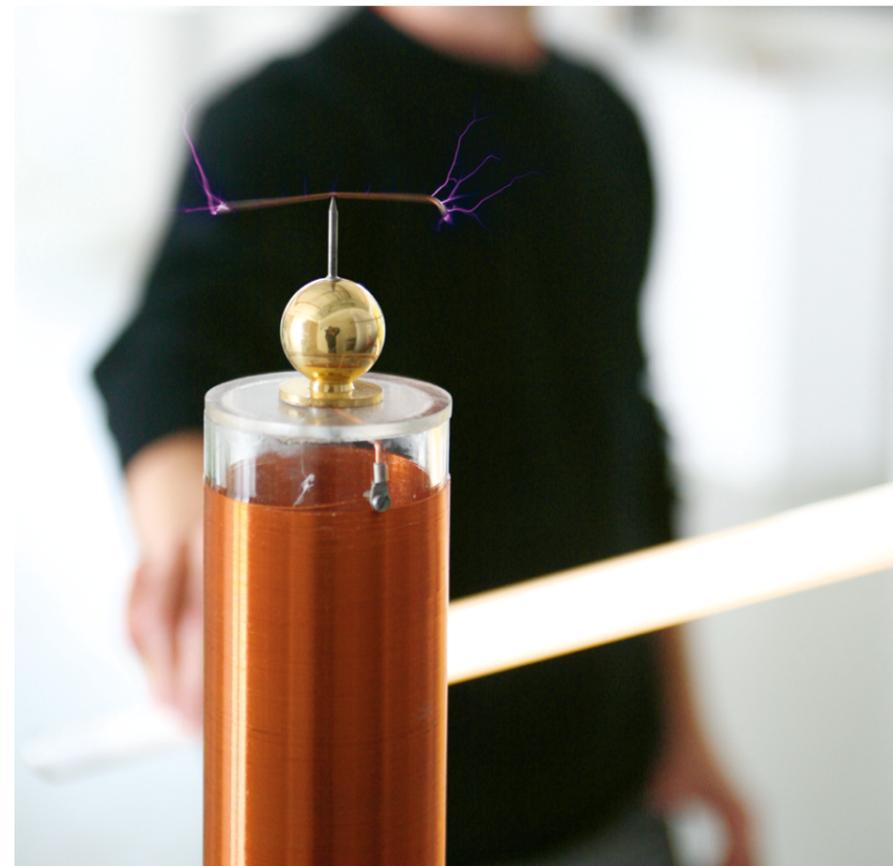
'HES-SO APPLIED RESEARCH GENERATES ORIGINAL IDEAS'

Core HES-SO mission is to conduct applied research and development. Each of its 28 Schools has institutes, laboratories and research units which head up innovative projects with a variety of partners at the regional, national and international levels.

Vincent Moser, Head of the R&D Support Unit, notes that research is important for each of the schools because it allows them to become centres of excellence and share their skills with companies and institutions in a variety of sectors. 'What is special about HES-SO research is its unrelenting focus on innovation. It is currently conducting several projects which involve researchers from different disciplines, such

as, for example, music and health. Interdisciplinarity such as this leads to unexpected discoveries.' For Patrick Furrer, Vice-Rector Research and Innovation, this allows the HES-SO to promote its skills both in the scientific community and in professional environment, through the transfer of technology and know-how for practical purposes.

It also benefits the students following our courses, as it does the general public, particularly through our biannual publication *Hémisphères* (a Swiss review of research and its applications) and through a variety of events, talks and themed exhibitions. ■



# Creative partnerships

**A**rt & Design at HES-SO does not only deliver high-level courses to its students. 'We are also launching a number of projects with local authorities and private organisations, as well as with local, national and international businesses, and this gives our students the opportunity to tackle some very real challenges,' says Alexis Georgacopoulos, Dean of the Faculty and Director of ECAL / Ecole cantonale d'art Lausanne. 'This collaboration lets our Schools gain visibility and extend their networks.'

Exhibitions, talks, competitions and regular contributions to international events such as the Milan Furniture Fair also boost our reputation.

Four Schools contribute to this discipline, namely: the School of Conservation-restoration – HE-Arc in Neuchâtel, the HEAD – Geneva, the Ecole cantonale d'art du Valais – ECAV and ECAL/Ecole cantonale d'art Lausanne. Each School specialises in different areas and their geographical proximity facilitates collaboration, particularly through research

projects in the fields of the arts and visual communication, interior architecture, design and conservation. This field of study offers five Bachelor's degrees and five Master's degrees. Since 2015, Arts & Design has offered the Innokick interdisciplinary Master's degree in collaboration with two other HES-SO faculties (Business, Management and Services, Engineering and Architecture). It allows young professionals to develop innovative products from the design stage through to final marketing. ■



#### HES-SO Schools

- School of Conservation-restoration – HE-Arc
- School of Art & Design – HEAD-GE
- School of Art & Design – Ecole cantonale d'art du Valais – ECAV
- School of Art & Design – ECAL/Ecole cantonale d'art de Lausanne

4

Schools

1,317

Students

5

Bachelor's degrees (BA)

5

Master's degrees (MA)

# Business leaders of tomorrow

**B**usiness, Management and Services, with more than 6,500 registered students, is the largest Faculty in the HES-SO.

It brings together five Schools of Management (HEG) located in Fribourg, Geneva, Neuchâtel/Delémont, Sierre and Yverdon-les-Bains, and the Ecole Hôtelière de Lausanne (EHL). It delivers seven Bachelors courses and four Masters in a range of areas in business. It also delivers a number of continuing education courses.

'This discipline has much to offer to economic development in French-speaking Switzerland,' said the Dean of the Faculty, Laurent Bagnoud. 'When the students we teach have completed their degree, they will become the workforces of the private and public business. Our researchers conduct projects with large numbers of small and medium-sized companies in French-speaking Switzerland at the national and international levels, and make a direct contribution to innovation and development.'

This important HES-SO discipline has almost 400 lecturers and researchers who carry out applied research projects in coordination with industrial partners, public administrations as well as small and medium-sized companies. ■

#### HES-SO Schools

- School of Management – HEG Arc
- School of Management Fribourg – HEG-FR
- Geneva School of Business Administration
- School of Management and Tourism – HES-SO Valais-Wallis – HEG
- School of Engineering and Management – HEIG-VD
- Ecole hôtelière de Lausanne – EHL

6

Schools

6,561

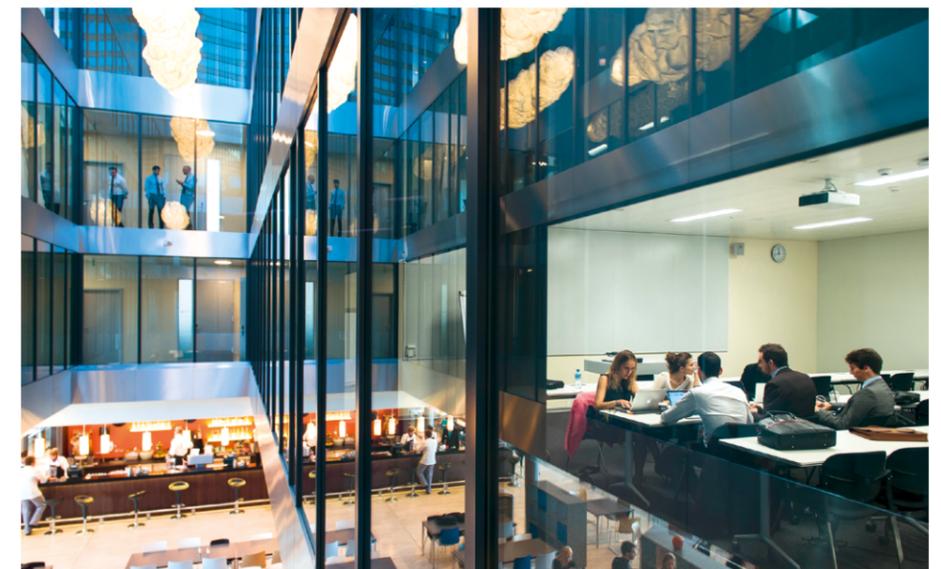
Students

7

Bachelor's degrees (BSc)

4

Master's degrees (MSc)

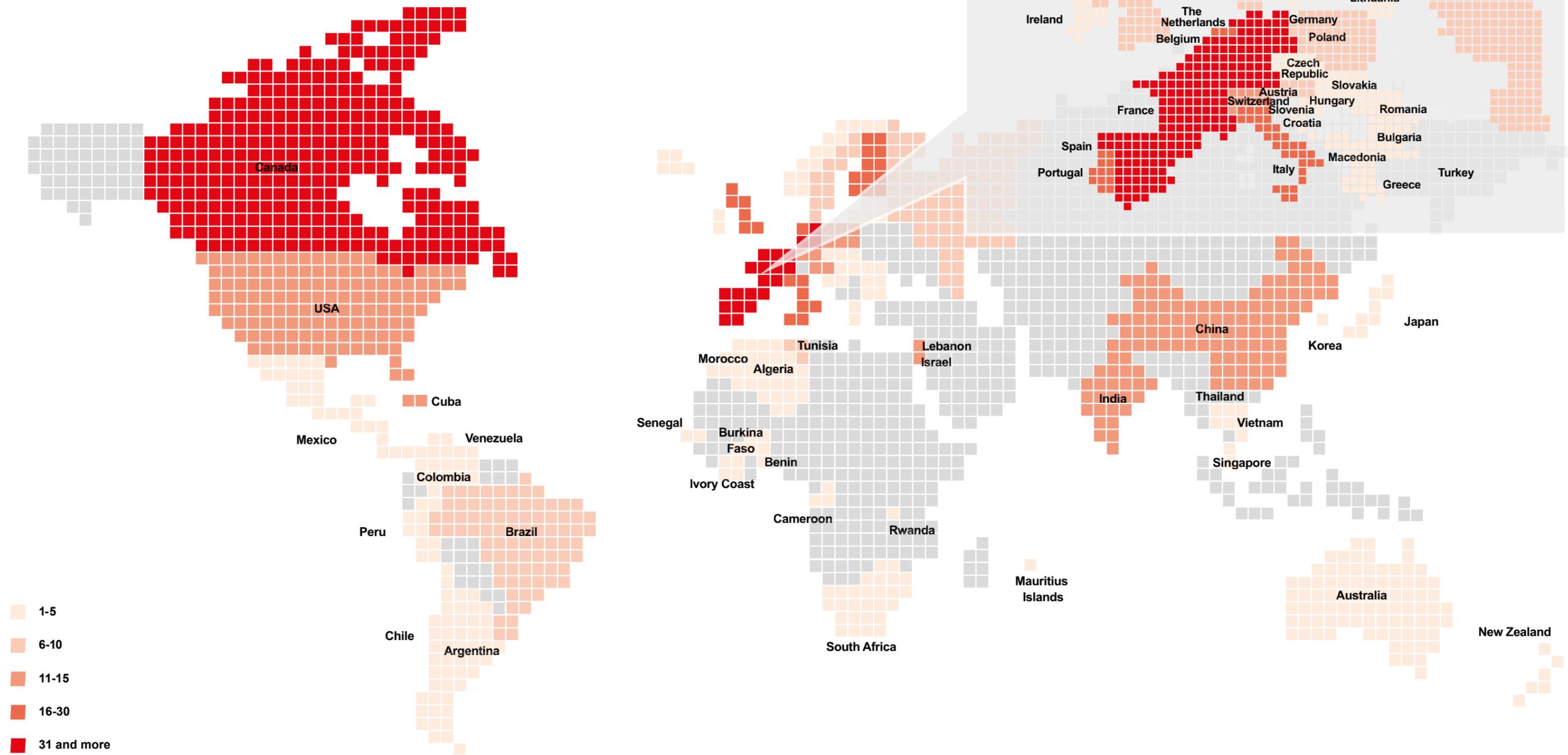


# International agreements around the world

The HES-SO and its 28 Schools have signed a number of collaboration agreements with university partners throughout the world.

| 10

HES-SO



HES-SO

| 11

# Ever-evolving courses

**M**ore than 4,500 students are registered for Engineering and Architecture at the HES-SO. This Faculty has four sectors: industrial technologies; information and communication technologies; chemistry and life sciences; construction and the environment. Courses are delivered in six Schools covering the whole of French-speaking Switzerland.

'Our professionally oriented courses are constantly evolving,' said Olivier Naef, the Dean of Faculty. 'They are regularly updated to meet market demands and preferences as well as technological change.' They are changing at Bachelors level with the addition of courses such as Energy and Environment technics and at Masters level with a new study course in Energy technologies, which will see its first intake in autumn 2016.



Engineering and Architecture has sought to decompartmentalise teaching and research: alongside two other HES-SO Faculties (Business, Management and Services as well as Arts & Design), it participates in Innokick, an interdisciplinary Master which seeks to help young professionals develop innovative products from the design to the marketing stage in helping them develop innovative products.

This Faculty, with more than 1,000 applied research and development projects (aR&D) under way, is becoming a dynamic centre of excellence capable of serving society and its needs. Its researchers are developing solutions in partnership with companies in the sectors of engineering, health, energy, materials and the Internet of Things.

- HES-SO Schools**
- School of Engineering – HE-Arc Ingénierie
  - School of Engineering and Architecture – HEIA-FR
  - School of Engineering, Architecture and Landscape – hepia
  - School of Engineering – HES-SO Valais-Wallis – HEI
  - School of Engineering and Management – HEIG-VD
  - Changins – School of Viticulture and Enology

**6**  
Schools  
**4,645**  
Students

**21**  
Bachelor's degrees (BSc and BA)  
**5**  
Master's degrees (MA and MSc)

# Learning to play the game

**P**laying an instrument, singing, performing a role, composing, improvising, directing actors and theatre companies, teaching, dancing – Music and the Performing Arts at HES-SO offers comprehensive training to its students, as it can draw on all the different strands of the performing arts. Its courses are delivered by three Schools on several campuses, including Geneva, Sion, Lausanne, Neuchâtel and Fribourg. La Manufacture – Haute école des arts de la scène offers a course in contemporary dance, with a Minor in creative dance, since 2014, which is unique in Switzerland.

It also collaborates with P.A.R.T.S in Brussels, a centre of considerable

international renown. The two Music Schools of Geneva and Lausanne offer a variety of courses in what is commonly known as classical music (from the Middle Ages to the present day), jazz and Popular music, composition, conducting (orchestral, choral and, wind ensemble) and the teaching of music. Philippe Dinkel, who is Dean of Faculty, notes that students can choose to complete two Master's degrees consecutively – one as a performing musician or as a teacher of music.

'This offers them the perfect preparation for their future career in the arts,' he said. To meet the demand generated by current interest in music and in oral traditions, a new Master's degree in ethnomusicology is scheduled to launch in September 2016, in partnership with the universities of Geneva and Neuchâtel. ■

- HES-SO Schools**
- Haute Ecole de musique de Genève HEM – Genève, with location in Neuchâtel
  - Haute Ecole de Musique de Lausanne HEMU – with locations in Sion and Fribourg
  - Manufacture Haute école des arts de la scène (Lausanne)



**3**  
Schools  
**1,206**  
Students  
**4**  
Bachelor's degrees (BA)  
**6**  
Master's degrees (MA)

# The skills of caring

In Health Studies, the HES-SO prepares students to different healthcare professions, including nursing – the course which attracts the greatest number of students – midwifery, nutrition and dietetics, radiologic medical imaging technology, occupational therapy, osteopathy, physiotherapy and psychomotricity. The number of students trained in this discipline has doubled since 2012 and now stands at more than 3,500.

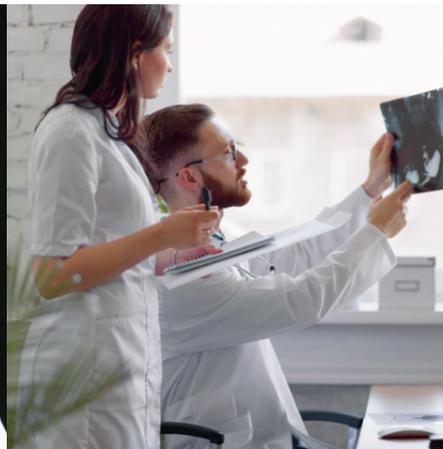
The programmes alternate between theoretical classes and practice in the form of internships in a number of health and social services institutions. 'This approach prepares students for the realities of professional life,' says Nicole Seiler, Dean of Faculty. 'Once they complete their courses, students have a wide range of job – working in hospitals, in outpatient care as freelancers and in humanitarian work.'

The Faculty of Health Sciences is expanding the range of courses it offers and opening up new prospects for students who would like to embark on a vocational and academic career. In addition to its eight Bachelor's programmes, it offers a Master in Nursing Sciences jointly with the University of Lausanne and is preparing to introduce Master's degrees in other areas within health studies. The discipline is also involved in international collaboration, offering a European Master in Midwifery Science, created jointly with European universities in Germany, Netherlands and United Kingdom. ■

8  
Schools  
3,556  
Students  
8  
Bachelor's degrees (BSc)  
2  
Master's degree programmes (MSc)

#### HES-SO Schools

- School of Nursing – HE-Arc Santé
- School of Health Sciences – HEdS-FR
- School of Health Sciences – HEdS-GE
- School of Social Work – HETS-GE (psychomotor skills)
- School of Health Sciences – HES-SO Valais-Wallis – HedS
- School of Health Sciences – HESAV
- School of Nursing – HEdS La Source Lausanne
- School of Social Work and Health Sciences – EESP Lausanne (Occupational Therapy)



# The reality on the ground



The Social Work Faculty set up a 'Summer University' for Master's students for the first time in 2009, and it has since run every year. 'This project was set up jointly by all the Schools delivering social work courses and is a unique venture within the HES-SO,' said Joseph Coquoz, the Dean of Faculty. 'It takes place over two weeks in July, at a partner institution in Switzerland or abroad (United States, China, India, Burkina Faso and Canada). It offers an intense experience which is highly appreciated by those who take part. Over these two weeks, students attend talks and workshops where they can compare their own social work practices with those from other cultures.' This programme has won a reputation for itself beyond the confines of Switzerland.

Joseph Coquoz points to the diversity of the students studying social work, some of whom have decided to reorient at a later stage in their professional lives. A special committee has been set up to help these particular students follow this course and to grant equivalences for prior training and professional experience. More than 40% of Master students have already studied another discipline. ■

# S

ocial Work degree courses are offered in four Schools (Fribourg, Genève, Sierre, and Lausanne). This Faculty is unusual in that it offers all students a single Bachelor's degree with the choice of three different majors: Community development, Social pedagogy, Social studies and services. The programme alternates between theoretical classes and practical internships over six semesters to offer students the best possible preparation for their professional career.

4  
Schools  
2,875  
Students  
1  
Bachelor's degree (BA)  
1  
Master's degree (MA)

#### HES-SO Schools

- School of Social Work – HETS-FR – Fribourg
- School of Social Work – HETS-GE
- HES-SO Valais-Wallis – School of Social Work – HETS
- School of Social Work and Health Sciences | EESP | Lausanne – HETS&Sa



# Key dates in the history of the HES-SO

## 1997

The inter-cantonal HES-SO concordat is signed. It brings together the seven partner cantons (Arc – Bern, Jura, Neuchâtel – Fribourg – Geneva – Valais and Vaud). It determines the HES-SO' structures and how it operates (disciplines of Engineering Sciences and Architecture, Economics and Services and Applied Arts).

## 2004

Merging of S0 and S2: the disciplines of S0 (Engineering Science and Architecture, Economics and Services, Design) and S2 (Health, Social Work) are brought together under the umbrella of the HES-SO.

## 2005

Music field of study joins the HES-SO.

## 2006

Fine Arts joins the HES-SO.

## 2007

The HES-SO receives authorisation to open eight Master degree courses (Art & Design, Business, Management and Services, Engineering and Architecture, Music and performing Arts).

## 2008

The Swiss Federal Council confirms the HES-SO's management authorisation to act as higher education institution.

## 2009

First academic year for the HES-SO Master in Lausanne. Launch of the Master of Science in Nursing Sciences jointly run by the HES-SO and the University of Lausanne.

## 2010

In January, the Swiss Federal Council grants unconditional approval to the HES-SO's draft agreement.

## 2011

New MSc in Geomatics, Land Management, Civil Engineering and MA in Theatre Studies.

## 2012

The new inter-cantonal agreement is validated by the parliaments of all the cantons of the HES-SO (Arc – BE-JU-NE, Geneva, Fribourg, Valais, Vaud).

## 2013

Implementation of the new agreement. Launch of 3 BSc degrees in Business Law, Energy and Environmental Engineering and International Business Management. The Governmental Committee decides the appointment of the rectorate comprising one rector, three vice-rectors and a general secretary.

## 2014

New BSc in Osteopathy, BA in Contemporary Dance.

## 2015

Opening of two Masters MSc in Integrated Innovation for Product and Business Development – Innokick and MSc in Global Hospitality Business.

## 2016

Opening of MA in Ethnomusicology jointly run with the Universities of Geneva and Neuchâtel.

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Switzerland

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University of Applied Sciences and Arts  
Western Switzerland

### Editor

HES-SO Rectorate  
Route de Moutier 14  
CP 452  
2800 Delémont  
Switzerland

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- p. 5 HES-SO – Thierry Parel
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- p. 7 HES-SO – Philippe Gétaz
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- p. 9 Ecole hôtelière de Lausanne – EHL
- p. 12 Dorothée Baumann
- p. 13 'Romantic German Music,' concert by the HEM – Geneva Orchestra / photo tissot.mayenfisch.com
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