Swiss Virtual Campus
Consolidation Phase – 2004 - 2008
CCSPs, projects and mandates
Overview
Swiss Virtual Campus

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Overview
We would like to thank all members of the eLearning community of the Swiss Virtual Campus. Our special thanks go to the steering committee for its commitment and the excellent collaboration and to the Federal authorities for their courage to provide financial support to such an innovative project!
Preface

This brochure introduces all products and services that were developed during the consolidation phase of the federal programme called Swiss Virtual Campus (SVC). It continues the SVC’s first brochure that was published under the title «The first 50 projects – 2000-2003»1,2. Together they offer an overview of the entire duration of the SVC.

The brochure is part of SVC policy pursued from 2004-2008 aimed at introducing and expanding SVC products and services beyond the Swiss community of higher education. As a part of this policy, all eLearning products and eLearning services received an additional platform for sharing information. In addition, the policy encouraged the creation of new networks and cooperation projects.

The brochure begins with a presentation of the SVC’s consolidation programme and then offers an overview of:
- the centres of competence, service and production (CCSPs) of the Swiss institutes of higher education,
- the projects of series 3 and 4, and
- the SVC’s mandates.

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1 http://www.swissvirtualcampus.ch
2 http://www.crus.ch/information-programme(swiss-virtual-campus)/resultate.html
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Swiss Virtual Campus

Historical Background of the Federal Programme

Context
Swiss Virtual Campus is a federal programme which was set up in the spirit of the 90s to promote the application of new technology in information and communication (NTIC). This idea was predominantly implemented using the strategy implemented by the Swiss Federal Council on 18 February 1998\(^3\) that encouraged the development of information and communication technology in the Swiss educational system, particularly at the level of higher education\(^4\).

With this aspect in mind, the programme of the Swiss Virtual Campus was launched. It consisted of two phases – the first one being the impulse phase (2000-2003), the second one the consolidation phase (2004-2007/2008) – and was financed with funds reserved for projects in accordance with the law governing the promotion of universities (UFG). The Swiss Federal Institutes of Technology (ETH) and the Universities of Applied Sciences (UAS) also participated in the project but provided their own funding.

Objectives
The Federal Programme SVC began with the aim to contribute to modernising and improving the quality of higher education in Switzerland, to promote the development of eLearning in educational institutions and to integrate these developments into curricula at institutes of higher education using the concept of blended learning.

Stakeholders
The Swiss University Conference was responsible for the programmes at the level of the institutions. Once the consolidation phase had begun, the programme’s operations management was entrusted to the Rectors’ Conference of Swiss Universities (CRUS), a move that underlines the SVC’S high academic ambitions. Two other institutions were also of importance: the State Secretariat for Education and Research (SER) as responsible body for credit management and controlling and the Federal Office for Professional Education and Technology (OPET) as responsible body for credit management and controlling.
A steering committee was set up to deal with all matters related to the introduction and


\(^4\) Excerpt from the execution plan 2004-2007 - [http://www.swissvirtualcampus.ch](http://www.swissvirtualcampus.ch)
implementation of the programme. Its objective was to determine and contribute to the impulses necessary for managing the SVC. The steering committee was supported by the SVC coordination team which was responsible for all issues related to organising the programmes.

The practical implementation of the programme was then assigned to selected project teams, to the competence centres and to the mandates.

**Consolidation Phase**

During the consolidation phase⁵, objectives from the impulse phase were partially resumed, modifications were made, experiences were integrated and the changing university landscape in Switzerland was given particularly close attention. The programme was based on the following four major focal points⁶:

- Development and consolidation of centres of competence, service and production (CCSPs) in every institute of higher education. This measure ensures that every Swiss institute of higher education has a service and production team to support the development of new online courses as well as the maintenance of already developed courses;

- Use and maintenance of already developed projects. Products of recognised quality which were developed already in the impulse phase received additional funds in order to guarantee their use and complete integration into the study programmes;

- Development of new courses. During the consolidation phase two calls for tender were initiated. In total, 64 projects were developed which were then distributed among the series 3 and 4 as follows: 32 projects were allocated to series 3, plus two additional projects promoted by the Federal Office for Professional Education and Technology (OPET) that the SVC coordination team managed, but that did not receive the «SVC» label. The remaining 30 projects were allocated to series 4;

- Services and coordination for institutes of higher education, including the realisation of a number of mandates. The main objective of these mandates was the rendering of services for institutes of higher education, in the technical area as well as in didactics.

In addition to the objectives determined in the execution plan, the initiatives of the steering committee that helped to ensure the development and sustainability of the activities performed in the consolidation phase must be mentioned. In 2005 the steering committee introduced a monitoring procedure for the CCSPs and the projects of the SVC. This procedure was designed to support the management of the CCSPs and their projects, if necessary. The steering committee also initiated a dissemination project that offered

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various events and activities to help the projects and CCSPs win new perspectives for developing and using their eLearning products and services - even beyond their own area. The steering committee has also launched other initiatives to prepare and follow-up the post-SVC phase.7.

The Legacy of the Swiss Virtual Campus

As the federal programme draws to a close, the question arises as to the SVC’s most important achievements. What type of knowledge or what competences developed within the framework of the SVC will be available to Swiss institutes of higher education in the future?

On the one hand, the SVC has contributed towards the general use of eLearning at Swiss institutes of higher education and, on the other, it has brought on the development of a congruent definition of the term «eLearning». Thus, terms such as «integrated learning» or «blended learning», which describe the combination of distance learning and classroom teaching units, have gradually found their way into everyday use. The eLearning modules developed within the framework of the SVC can now be easily integrated into the curricula of the institutes of higher education and be used more flexibly. At the same time, a consensus was found on the usefulness and the significance of eLearning as a tool that contributes to modernising and improving the quality of teaching at institutes of higher education in Switzerland.

Moreover, the SVC developed a comprehensive series of instruments that can be reused by the universities again and again. This includes no less than 112 projects that were developed in the two phases of the programme and that cover a broad range of disciplines from medicine and social sciences up to sports. Centres of competence, service and production (CCSPs) were established or developed in every institute of higher education. All technical services developed within the scope of the SVC mandates belong in this category. Thanks to the successful collaboration of Edutech and SWITCH, a permanent solution for the eLearning platform could be found. SWITCH acquired the permanent licence for the country-wide Vista-platform and provides a support system for one or two open source platforms as well. Moreover, an administration system was implemented for

7 See paragraph «After the Swiss Virtual Campus»
the authorisation and authentication infrastructure (AAI) to facilitate allocating resources. In addition, a learning object repository (LOR) was made available by SWITCH on a national level.

One of the SVC’s strengths is undoubtably the fact that it has enhanced cooperation among Swiss institutes of higher education. Creating a network between at least three participating institutes was one of the criteria for the projects. These networks have established permanent links between the different types of institutes (universities or universities of applied sciences) and across the language borders as well.

Furthermore, SVC has made a substantial contribution to creating and consolidating the eLearning community in Switzerland. Members of this community were able to meet and share experiences on the annual SVC Days and at the numerous SVC workshops.

Finally, it must be mentioned that all these SVC activities and initiatives have helped Switzerland to gain international recognition in the field of eLearning and to strengthen the country’s reputation in this area.

In view of this success, the SVC can proudly present a sound and stable legacy to the Swiss institutes of higher education. The SVC is confident that there will be great opportunities ahead for eLearning in Switzerland.

**After the Swiss Virtual Campus**

Already at the beginning of the consolidation phase it had been determined that the costs for funding eLearning projects should gradually be integrated into the normal budgets at the institutes for higher education. The Rectors’ Conference of the Swiss Universities (CRUS) confirmed this plan in September 2007 and emphasised that in the future the development of eLearning as an inherent component of teaching would lie in the sole responsibility of the institutes for higher education.

With this in mind, all stakeholders have prepared for the transition and the handing over of projects to the two major stakeholders: the centres of competence, service and production (CCSPs) and the foundation SWITCH, both of which will offer a package of central services for the teaching staff after the SVC phase.
CCSPs
The centres of competence, service and production (CCSPs) at the various institutes of higher education have been implemented or strengthened in the SVC’s consolidation phase and will essentially continue to function in the post-SVC phase and promote the development and the use of educational technology. Although the size and organisational structure of the CCSPs may vary among the different institutes of higher education, the services they offer can be classified into two major categories: support in didactic or technical questions as regards implementing eLearning tools, and support for the executive boards at the institutes of higher education regarding the strategic integration of new educational technology to improve the quality of academic teaching.

SWITCH
SWITCH has always been a preferred contact of the SVC. Particularly within the framework of the mandates assigned by the steering committee of the SVC, SWITCH has developed a broad range of services for the eLearning community. Over the course of time, this collaboration has evolved into the «eduhub»8 concept, first initiated by the SVC and consequently elaborated and implemented by SWITCH. This concept enables SWITCH to regularly offer the Swiss eLearning community an entire package of activities and central services9.
One of the more important activities was setting up the «Educational Technology Working Group» which provides a platform for various representatives of the CCSPs and the stakeholders who are responsible for new educational technology at the institutes of higher education. The working group aims to promote educational technology in academic education in Switzerland by cooperating mainly on a national level. Other goals include political lobbying and international networking.

Teaching staff
However, beyond establishing the central services that are now available, it is obvious that the success of eLearning in the post-SVC phase and in the coming years will also depend on teachers and lecturers, their enthusiasm and commitment, and their conviction of the benefit of new educational technology.

8 http://www.switch.ch/eduhub/
9 Please see «The Legacy of the Swiss Virtual Campus»
Centres of competence, service and production (CCSPs)

Upon concluding the SVC, the political means for implementing new technology are entirely in the hands of the institutes of higher education. It is for this reason that the CCSPs are comprehensively presented in this brochure. The SVC considers the CCSPs to be the leading stakeholders and future contact partners for all questions related to educational technology.

The following pages present all competence centres from the various institutes of higher education in Switzerland, including the centres at the two Federal Institutes of Technology (FIT), although they were not funded by the SVC.

This presentation of the CCSPs depicts the type and structure of organisation at the centres, the objectives and eLearning strategies at the respective institutes of higher education, and the activities and services that are offered. A link is provided for the website of a given CCSP to give readers the opportunity to obtain further information.
LearnTechNet: Competence Network for New Media in Teaching
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www.ltn.unibas.ch

New media can add many facets to teaching and studying, simplify organisation or improve didactics. They can reinforce the role of lecturers as well as enhance classroom activities and independent study.

With this in mind, LearnTechNet (LTN) offers advisory services in the design and use of new media in teaching. It offers courses and events and provides a number of tools. In addition, the LearnTechNet partners are involved in developing electronic courses provided by the University of Basel – from the didactic concept and developing or adapting suitable software up to media development and design.

LearnTechNet (LTN) is a network based on the principles of partnership; Academic Teaching Development (ALE), New Media Centre (NMC) and University Data Processing Centre (URZ) collaborate and contribute their specific competences from the fields of didactics, media development and technology. The LTN was founded in 2001. All partner institutions created new jobs expressly for field of new media and provided funding as well.

The services provided by LTN are in principle available to everybody and can be accessed by external users upon a surcharge. The tools developed by LTN are accessible to the public free of charge in the spirit of open source thinking.
Tasks and competences of iLUB
The support team for ICT-supported teaching at the University of Bern (iLUB) offers a service to lecturers and teaching assistants at the University of Bern which is intended to promote innovation in teaching, particularly in ICT-supported teaching. The iLUB is open to all units at the University of Bern.

- Regular colloquiums on e-learning
- Survey of activities among lecturers regarding the use of ICT in teaching, including lecturers’ needs regarding support
- Counselling and support for institutions, lecturers and assistants of all faculties at the University of Bern wishing to complement their teaching with ICT elements
- Conceptual design and adaptation of ILIAS to local conditions at the University of Bern
- Usability-Testing, hosting ILIAS test installation
- Support for lecturers in using the ILIAS and Blackboard Vista learning platforms
- Courses on how to use tools from new teaching media and hands-on courses for ILIAS (platform for teaching and collaboration)

The support team for ICT-supported teaching draws on long-term experience at the Education and Media Unit (AUM) in the Medical Faculty and the Institute of Educational Studies (IfE) in the Faculty of Human Sciences and offers professional know-how in the field of media-supported teaching. Users receive both didactic and technological competence from the same source.
**Centre Nouvelles Technologies et Enseignement (Centre NTE)**

*Dr. Gérald Collaud, Responsable, gerald.collaud@unifr.ch*

http://nte.unifr.ch/

The NTE Centre currently disposes over slightly more than four full-time job equivalents, of which 3.5 are paid from the university budget. The full-time job equivalents are divided among five employees. The NTE Centre is independent of the faculties; rather, it reports to the rectorate’s Commission of Education where all faculties are represented.

The major objective of NTE is to improve the quality of teaching by using information and communication technologies (ICT). For the best possible results, the NTE also gauges the impact that the use of ICT has on both lecturers and students.

The NTE uses a course platform called Moodle. In addition, every year the NTE issues a call for projects and selects several student proposals that have potential for development. The NTE also serves a centre for continued education and offers an e-learning helpdesk.

Two features of the NTE centre are particularly striking. Firstly, the NTE centre has two parallel areas of competence in the field of pedagogics and computer sciences. Thanks to this, the NTE offers an interdisciplinary approach to the difficulties lecturers face. Secondly, the NTE is responsible for supplying services as well as teaching and research activities. In particular, the lectures in Bachelor and Master courses enable a direct assessment and observation of the impact ICT applications have in an academic environment.
Réseau e-Learning (ReL)
Prof. Yves Flueckiger, vice recteur, yves.fluckiger@unige.ch et
Dr. Pierre-Yves Burgi, responsable service NTICE (pierre-yves.burgi@unige.ch)
http://elearning.unige.ch

The e-Learning net (Réseau e-Learning – ReL) operates under the leadership of the rectorate and mainly relies on two units for support and production of didactic (FormEv, www.unige.ch/formev) and subject-related matters (NTICE, www.unige.ch/dinf/ntice): a research programme dealing with educational technology (TECFA, tecfa.unige.ch) and an e-Learning representative appointed by the university.

For several years, the units of production have ensured a broad-scale application of educational technology with the help of computers (dokeos.unige.ch and moodle.unige.ch), which are used by many student and lecturer associations. A further advantage is that lecture scripts can be accessed on the system (mediaserver.unige.ch).

E-Learning is not an end in itself and ReL’s longterm goals are generally embedded in the Bologna process, where virtual mobility is introduced to study programmes and educational technology is integrated into the teaching and learning processes. ReL’s active involvement in country-wide activities such as the Swill-LOR project, the eduHub initiative and the «Educational Technology Working Group» round off these goals. Furthermore, ReL membership in virtual campuses such as e-leru (eleru.leru.org) and VCSE (www.vcse.eu) strives for a very concrete consolidation of our e-Learning experiences within a European framework.
Réseau Interfacultaire Teaching Qualifications et Technologies (RISET)
Nathalie Bagnoud, Coordinatrice RISET, Nathalie.Bagnoud@unil.ch
www.unil.ch/riset

RISET comprises a group of individuals who are in charge of integrating technologies into courses and lectures at the University of Lausanne (UNIL). Their philosophy is to respond to individual needs under close consideration of didactic intent. The advantages lie in decentralisation (proximity to the users) and the horizontal structure of the organisation. Members are engineers in educational sciences, representatives from the CSE (Centre de soutien à l’enseignement), representatives from the data processing centre and the communication and audiovisual areas, experts for continuing education, but also technical staff and partners in flexible distance learning projects (lecturers and teaching assistants). The responsibility for RISET lies with the vice rector (valuation and quality).

In accordance with UNIL’s strategic plan, RISET is responsible for the coordination, support and valuation of products related to innovative technology, thereby contributing to the improvement in teaching conditions. Based on individual initiative on the part of lecturers, RISET provides lecturers and students with didactic, subject-related and management-resources that have been won by means of educational activities, increased awareness, technological monitoring and research. RISET also contributes to embedding UNIL’s strategy in the field of «Technology and Education».
The Center for E-Learning of the University of Lucerne is a cooperation project with the Teachers Training University of Central Switzerland Lucerne. The Center consists of 4 co-workers with didactic-pedagogical and technical backgrounds.

The Center for E-Learning implements the E-Learning Strategie of the Partners institutions by coordinating and promoting computer supported learning, teaching, and research. Within the didactical-educational and technical areas, the Center also provides technology, consulting, coaching, content development, and continuing education to Partners institutions of the Virtual Campus Lucerne, Universities of Applied Sciences, other educational organizations and private Partners in the region of Central Switzerland.

The goals of the Center for E-Learning are:
- To build up and maintain a technical elearning infrastructure
- To evaluate and implement learning management systems, synchronous and asynchronous collaboration tools, authoring tools, etc.
- To establish support structures and processes for teaching staff and students
- To coach teaching staff in order to enable them to use elearning as a (didactical) method for teaching and knowledge management (for example, in research)
- To support existing online courses
- To provide continuing education, trainings, and workshops
- To produce online courses in cooperation with the teaching staff
- To develop and implement an elearning strategy for the Partners institutions
- To initiate and coordinate regional, national, and international partnerships in the area of E-Learning
- To develop strategies for sustainability and further development of the Center.
Centre E-Learning
Jean-François Perret, jean-francois.perret@unine.ch
www.unine.ch/qualite

An entire network of employees ensures the practical support of E-Learning. They use supplementary (technical or didactical) competences to develop the use of ICT in teaching and research. This network operates like a virtual laboratory whose structure develops as projects are realised.

The network’s activities are part of the general mission of the quality department. The department’s main objective is to foster a stimulating academic education. The objectives of the virtual laboratory mainly relate to the following topics:

- Promoting an efficient and creative use of the platform Claroline adopted by UniNe;
- Testing IT tools that correspond to specific educational needs and evaluating their didactic value;
- Further developing the access to online information and evaluating its influence on learning;
- Analysing today’s new orientation in E-Learning.

The organisation is characterised by its ability to integrate E-Learning into the different measures taken to foster teaching: advice, education, monitoring and evaluating of projects.
Computer-assisted Teaching and Assessment (CATA)

Dr. Eva Seiler Schiedt, Leiterin Fachstelle E-Learning Center ELC, eva.seiler@access.uzh.ch
www.elc.uzh.ch
www.id.uzh.ch/org/mels.html

The department CATA comprises the competence centres E-Learning Centre (ELC) and Multimedia and E-Learning Services (MELS) and offers central counselling and services in E-Learning, e-assessment, multimedia production and audio/video services. CATA supports lecturers who plan to supplement their courses with blended learning options. In and outside the University of Zurich, CATA maintains a network to share experiences. CATA also counsels the directors of the university on all topics regarding E-Learning.

The services offered by MELS include the technical planning of audio-visual infrastructures in lecture rooms, transmitting and recording lectures, streaming, video conferencing and preparation of e-content, the production of multimedia contents, and counselling and schooling in connection with the strategic platform OLAT and its operation and development.

The tasks of ELC comprise the supply of up-to-date information on E-Learning, providing support for the conceptual design of E-Learning projects, advising university lecturers, faculties and departments, and giving support in the evaluation of courses that use a blended learning environment. Development tasks are carried out in a project-oriented way. ELC also offers courses, seminars and workshops on E-Learning and links the persons in charge both in and outside the university.
Selbststudium- & eLearning Team

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www.studynet.unisg.ch
www.selbststudium.unisg.ch
www.studycube.ch

Two teams, one from the computer science department (E-Learning) and one from the Institute of Business Education & Educational Management (independent studies), closely collaborate to proactively support lecturers and programmes in using new media for independent study courses and beyond.

The following objectives are pursued:
- Extensive and practical use of the StudyNet learning platform;
- Enhancing academic teaching by increasing the use of media-based, interactive and individualised learning environments;
- Developing social, team and media competences in independent study. www.studycube.ch is a key website in this field.

The E-Learning team supports lecturers in the use of StudyNet, in questions on multimedia design and in the production of video recordings and video conferences. The independent study team advises the executive board at the university, programmes and lecturers in questions concerning didactics in higher education under particular consideration of the didactic design of E-Learning in independent study.

The University of St Gallen was awarded the Medidaprix in 2006 in the category of University Development for its joint approach to promoting new media.
eLab is the CCSP of USI and SUPSI. Its goal is to promote the development of eLearning applications at USI and SUPSI, and, less directly, in the Italian speaking part of Switzerland. To achieve this goal, eLab provides faculties, departments, institutes, lecturers, and collaborators of both institutions with all the necessary infrastructures and support services. Among the services offered to USI and SUPSI, eLab manages eCourses (http://corsi.elearninglab.org/), a Moodle-based Learning Management System. In addition, eLab offers different kinds of workshops about the use of ICT in teaching and learning activities, dealing with both technological and pedagogical issues.

eLab is currently collaborating with some private companies and organizations to help them introduce ICT into their training practices, offering them technical support and pedagogical advice; in this context, eLab is also testing the integrated use of different devices, such as the Portable PlayStation as an additional tool for eLearning activities. Finally, after the end of the SVC, eLab is guaranteeing the technical management and maintenance of the 17 SVC projects that were promoted by USI and SUPSI and supported by eLab itself.
Centre e-learning // HES-SO Cyberlearn
Anne-Dominique Salamin, Responsable du centre Professeur HES,
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www.cyberlearn.ch
http://cyberlearn.hes-so.ch

Cyberlearn HES-SO e-learning Center is a «light» structure located in the HES-SO Valais, Sierre. The steering meetings take alternatively place in any of the HES-SO sites. A steering committee made up of 13 persons involved in different HES-SO fields, all with a solid background in e-learning, manage and endorse realizations and decisions taken by the Center.

The Cyberlearn Center action relies on 5 points :
- Federating and supporting e-learning initiatives among HES-SO members
- Backing professors for the integration of blended learning in their teaching
- Testing and making available existing e-learning refresher courses, tools and suitable techniques to professors
- Developing e-learning courses
- Carrying out research tasks in the e-learning field

Activities and services
- Blended learning courses evaluation and certification
- Multimedia resources implementation
- e-learning pedagogical concept development
- Moodle platform administration and helpdesk
- Professors and assistants training
- Research on innovative e-learning initiatives (i.e. Pedagogical Podcast)

Integration
Any kind of e-learning projects, tasks and requests related to the field are dispatched by the HES-SO rectorship to Cyberlearn to be processed and implemented.

Specificities
Integration of HES-SO sites learning needs in a unique e-learning project.
InnoTeach – Kompetenzzentrum für neue Medien in der Lehre
Christian Schmid, Co-Leiter Fachstelle Hochschuldidaktik & E-Learning, christian.schmid@bfh.ch
http://innoteach.bfh.ch

InnoTeach is part of the central services at the Bern University of Applied Sciences (as of October 2008 competence centre for university-level didactics and E-Learning) and comprises a team of six collaborators.

The competence centre…
- actively supports individuals involved in the field of teaching (lecturers, assistants, tutors);
- facilitates the further development of individual competences in didactics and E-Learning;
- supports (media-oriented) didactical development projects in courses of study or departments;
- promotes the development of pedagogical methods and the implementation of E-Learning;
- initiates activities for sharing experience and information at the Bern University of Applied Sciences.

Offers
1. Advice - The competence centre offers advice for individuals as well as for student councils, courses of study or departments in questions about media-oriented didactics.
2. Continuing education - The competence centre organises a wide range of courses and, in the field of E-Learning, workshops on Moodle, sharepoint, podcasting, screencasting, wikis and blogs.
3. E-Learning support - The competence centre offers concrete support, including the following tools or subjects: Using the Moodle learning platform, using the sharepoint platform, e-assessment: creating online-tests, Podcasting / Screencasting.
4. Sharing information and experience - The competence centre issues a newsletter for information, publishes papers on related subjects, organises events and provides information on its website.
The Fachstelle Neue Lernmedien is organized as a central service plus a network of five e-learning delegates of HSLU.

The orientation of the CCSP’s activities corresponds to the target goals (consolidating and expanding e-learning as an inherent part of teaching), an e-learning strategy exists since August 2005, the departments have autonomy but all use the centralized e-learning platform, including the HSLU management. The e-learning platform is strategically used for bachelor, master and further education. Services are provided for collaborative work, blended learning, test, assessment, survey, and quality assurance.

The main activities are:

SVC projects: project support as leading house.

Support and other activities besides SVC projects for in-house clients and industry partners:

- Consulting: conception, management and production of blended learning arrangements; organisation and tutoring of e-learning courses;
- Training: Technical and didactical support;
- Support: Help desk;
- Platform services: administration and operation of the e-learning platforms ILIAS, MediaWiki, WordPress and EvaSys;
- Software development: enhancements for ILIAS; tools for content production and interchange;
- Content production: online tutorials and tests, animations and simulations, audio and video sequences.

Competences: content production based on open standards and technologies; content tailoring for mobile devices; interactive visualisations of software engineering concepts and financial models, active participation in ILIAS open source community.
CSPC e-Learning
Dr. phil. Andrea Helbach, Leitung, andrea.helbach@zfh.ch
www.elearning.zfh.ch

The CSPC e-Learning at the Zurich University of Applied Sciences (ZFH) is a competence centre for all institutes affiliated with the ZFH. A central office was set up in 2005 to ensure the long-term development and integration of e-Learning at the ZFH. It is organised in a network with decentralised teams at the ZFH. The CSPC is responsible for the coordination.

The CSPC pursues the aims of sustainable integration and the promotion and development of competences in e-Learning on different levels. The CSPC organises e-Learning courses for lecturers and research associates, encourages new e-Learning teaching and learning units (as part of its support programme) and realises comprehensive initiatives in e-Learning to the benefit of all institutes of higher education. In addition, CSPC created the format «e-dossier» and issues regular publications on relevant subjects via its internet portal. Other activities are conferences or information days.

Thanks to its mandate in the working group «Teaching» at the ZFH, the CSPC takes part in the agenda for institutes of higher education (where e-Learning and academic didactics intersect).

Since the start of its activities, the CSPC has had a particular interest promoting the synergies between the institutes at the ZFH and in the exchange with other educational institutes and networks.
The support provided by the Federal programme SVC made it possible to link the FHO’s previously developed e-Learning competences and to substantially increase existing know-how.

Activities and topics of interest in the e-Learning competence centre at the FHO:
- The FHO’s e-Learning competence centre informs responsible or interested persons at the four campuses about developments in e-Learning.
- It supports the campus project teams in planning and carrying out e-Learning projects.
- It co-ordinates e-Learning projects at the FHO and promotes the production of reusable learning tools.
- It plans and carries out appropriate courses in continued education.
- It represents the concerns of the FHO with regard to e-Learning in the expert commission on e-Learning at the Rector’s Conference of the Swiss Universities of Applied Sciences (KFH).
eLearning Services

The FHNW terminated its central CCSP at the end of 2007. The institute’s branches are now responsible for relevant services.

www.fhnw.ch

The development of pedagogical, technical and organisational standards that were oriented around quality factors in teaching and research has determined the level and extent to which new learning technology was used in the institutes of higher education at the University of Applied Sciences Northwestern Switzerland (FHNW).

The CCSP eLearning Services accompanied these developments at the institutes of higher education and supported them by coordinating knowledge and services.

In addition, the CCSP eLearning Services FHNW has offered conceptual, particularly didactic and methodical support to facilitate the integration of eLearning into the teaching activities of the FHNW. It has also provided strategic and content-related support predominantly for the SVC projects during the years funded by the SVC.

The CCSP has represented the FHNW in the Swiss eLearning committees.

The CCSP has compiled an overview of all eLearning activities including the platforms and tools used by the individual branches of the FHNW.

Moreover, the CCSP has organised numerous events («eLearning Forum FHNW»).
Center for Research and Support for Training and its Technologies (CRAFT)
Patrick Jermann, Patrick.Jermann@epfl.ch
http://craft.epfl.ch/

CRAFT deals with education in a broader sense at the EPFL. Its tasks include advising and assessing courses that accompany the projects on educational technology. CRAFT disposes over 1.5 full-time job equivalents for matters in educational technology.

The «Fonds d’Innovation pour la Formation» (FIFO, http://craft.epfl.ch/page68681.html) provides funding for projects with innovative teaching methods. Educational technology is seen as a way to supplement lectures and is not meant to develop into an activity of its own. That is why the EPFL prefers projects that enable students to become more active when looking for solutions, both in independent research and when working in groups. Evaluating the projects is part of regular course evaluation.

Moreover, CRAFT considers the different uses of Moodle (http://moodle.epfl.ch/) and its integration into the technological landscape at the EPFL. Prior to the start of the semester, students are offered introductory workshops.
**NET – Network for Educational Technology**  
*Koni Osterwalder, Leiter, osterwalder@net.ethz.ch*  
www.net.ethz.ch

NET is part of the Centre for Higher Education, an ETH infrastructure division which is directly responsible to the rector. NET divides into 5 sub-units: ELBA (E-Learning-Baukasten), groupware/LMS, e-collaboration, Filep and the e-learning strategy implementation team. NET and the Centre for Higher Education are currently adjusting their business areas according to the new e-learning strategy of ETHZ.

NET offers a range of services, is responsible for a reasonable use of technologies for teaching and learning and fosters innovative didactical scenarios.

**Activities**
- E-Learning Services: ELBA (toolbox with easily usable, intuitive, single purpose applications) and Web based learning environments (Blackboard CE, ILIAS, Moodle, BSCW)
- Projects for e-assessment, e-collaboration, podcasting and learning content management
- Didactical and technical support and consulting for the use of E-Learning
- Review process for the project applications for the fonds Filep.
- Variety of information and qualification events and activities ranging from small lunch seminars (NET à la carte), participation in the programme «didactica» up to organising conferences (NET-ELC Tagung).

NET exists since 1996, did not depend on SVC funding and closely collaborates with the E-Learning Center of University Zürich.
The projects of series 3 and 4

The following pages present all 64 projects from the consolidation phase, including two projects funded by the OPET which do not have the SVC label. The projects are listed according to their main discipline and were allocated to a total of 14 disciplines.

The individual projects are presented according to the following criteria: content, objectives, added value and the project languages. An Internet link for the project as well as the address of the relevant contact person is provided in case additional information on a given project is desired.
ICT, law and society

**Leading House:** Bern University of Applied Sciences

**Partners:** Scuola universitaria professionale della Svizzera italiana, University of Applied Sciences Western Switzerland

**Contact:** Module 1: Kurt Bonaria, bonaria@recht-net.ch

**Contact:** Module 2: Mathias Kummer, Master of Law, mathias.kummer@weblaw.ch

**URL:** Module 1: http://moodle.bfh.ch/course/view.php?id=5

**URL:** Module 2: http://moodle.bfh.ch/course/view.php?id=169

Module 1: Post-graduate course in corporate law

Contents: Basic principles of corporate law in theory and practice

In-Depth Practice: Online role-play of a board of directors’ meeting

Course size: 15 learning units

Module 2: Post-graduate course in computer science and Internet contracts

Content: Basic legal principles for a professional IT project, specific differences of various IT contracts, risks and criteria of contracts, negotiating and drawing up of relevant IT contracts (group work)

Objective: Acquiring a «legal toolkit» for your next IT project – optimal with regard to its legal validity, without unnecessary dependencies and risks

In-Depth Practice: The students deal with a «big» case in groups, including pre-negotiation discussions, negotiating contracts and editing contract clauses

Course size: 10 learning units

The learning units are in principle independent and comprise theory, self tests with sample solutions and assignments for group work.

In keeping with the course title, both modules use new learning technology and electronic media.
Nicephor[e] – On-line Course in Scientific and Forensic Photography

**Leading House:** University of Lausanne  
**Partners:** University of Basel, University of Applied Sciences Western Switzerland, Swiss Federal Institute of Technology Lausanne, ELINCA SA, LEICA, PhaseOne, SINAR  
**Contact:** Romain Voisard, Romain.voisard@unil.ch  
**URL:** [http://nicephore.unil.ch](http://nicephore.unil.ch)

Nicephor[e] allows teachers to create distant or blended courses in forensic and scientific photography. The aim is to propose a collection of learning objects (LO) on photography that can be organised in modules, depending on the requirements of a specific course, in a learning platform. The 4 main pedagogical goals for these modular courses correspond to what can be expected from a scientific photographer:

- Describe the physical and chemical phenomena involved in the creation of an image.
- Propose a photographic method for signal capture.
- Evaluate and analyse images.
- Define, explain and apply operating procedures.

The Nicephor[e] architecture consists of 3 different parts:

- A content management system (typo3) used to create, publish, administrate and store all the dynamic content.
- Learning management systems (Web-CT, Moodle) that can deal with complex learning scenarios, content distribution, and interactions.
- An image management system (DAM of Typo3) to manage all the image production.
E-MHEM – E-course in Management for Masters in Health Economics and Management

Leading House: Università della Svizzera italiana
Partners: University of Lausanne, Scuola universitaria professionale della Svizzera italiana, Zurich University of Applied Sciences, University of Bocconi
Contact: Prof. Dr. Marco Meneguzzo, marco.meneguzzo@lu.unisi.ch
URL: www.e-mhem.ch/

E-MHEM is a project aimed at developing e-learning supports for courses in economics and management for healthcare organizations. All the outputs produced by the E-MHEM project are designed to be used:
1) at a university level, as a pedagogical support for Public Management and Health Management courses;
2) in Executive Masters in Health Economics and Management, as a tool to build up a common starting framework and as a new methodology within the traditional health management courses;
3) in continuing education for health managers and professionals;
4) for lecturers and researchers, as a comprehensive support for updating contents, materials and methodologies.

Basic pillars are designed for self study, while the core modules, the E-MHEM simulation and activities on the virtual community are organized to be used as support for ex cathedra simulations and individual or work-in-group task assignments and for thematic study-in-depth activities.
ESO – Economic and Social History Online

**Leading House:** University of Zurich  
**Partners:** University of Geneva, Swiss Federal Institute of Technology Zurich, University of Vienna, University of Tübingen  
**Contact:** Prof. Dr. Jakob Tanner, jtanner@hist.uzh.ch  
Prof. Dr. Ulrich Woitek, u.woitek@iew.uzh.ch  
**URL:** www.eso.uzh.ch

The project Economic and Social History Online was designed for students in the interdisciplinary field of social and economic history. Apart from an introduction to the subject, ESO comprises the module «Themes» (German), which treats relevant aspects of social and economic history of the 19th and 20th century, the module «Methods» (German/English), which teaches the fundamentals of handling historical data and economic theories, and the module «Historical statistics online», which contains approximately 10,000 time series. ESO was developed at the University of Zurich under the chairs of Prof. Jakob Tanner and Prof. Ulrich Woitek. The course imparts the ability to connect approaches of cultural and social history with economic methods when analysing historical processes while making extensive use of data from «Historical statistics online». ESO is suitable as a stand-alone training and can also be embedded in blended learning scenarios in university teaching.
Market Research Interactive : Data Collection, Analysis, and Interpretation

**Leading House:** University of St Gallen  
**Partners:** University of Basel, University of Applied Sciences Northwestern Switzerland, Institut für Demoskopie Allensbach, GfK Gruppe  
**Contact:** Prof. Dr. Torsten Tomczak, torsten.tomczak@unisg.ch  
Prof. Dr. Sven Reinecke, sven.reinecke@unisg.ch  
Dr. Walter Herzog, walter.herzog@unisg.ch  
**URL:** www.mri.imh.unisg.ch/

Market Research Interactive is a blended learning environment, designed to supplement a market research course with content that is difficult to convey in text-books or in the classroom. In particular, interviews with «veterans of market research» demonstrate the classical market research process - from initial definition of the problem under investigation up to the final report. A total of 131 partial interviews with our experts inform about advantages and disadvantages of methods for the collection and analysis of data and underline the political dimension of market research within companies. In addition, the complete process of market research is demonstrated by means of three real-life projects (analysis of customer satisfaction, a study on launching a new product, and a study on European integration). On the whole the course offers a practical perspective as a supplement to the theoretical knowledge imparted in classroom lectures and books.
The project Tricks of the trade follows the notion that students completing their studies at the University of Applied Sciences should have acquired excellence in solving practical problems according to the canons of scientific methodology and state-of-the-art knowledge in the respective fields.

Advising students in methodology and scientific skills requires new ways of teaching that are problem-based and supported by modern information technologies in order to support them in their practical work and in order to motivate them to learn a subject that oftentimes is perceived by students as very factual and dry. As future decision makers, students should gain a deeper understanding of scientific working skills because these will support them in practice to independently solve complex problems and to critically deal with different knowledge sources.

The goal of this project therefore is to develop a blended-learning course that teaches the students the tricks of the trade, the basic skills for scientific working, in order to prepare them for solving practical problems on a qualitatively high level. The course respects didactical methods that are problem-based and that effectively make use of e-learning. Furthermore, the course is aligned with the requirements relevant for a bachelor level.
In all functions outside strategy and the classical financial sector, «value management» is a necessary (if not sufficient) prerequisite for the long-term success of a company. This course is mainly meant to increase students’ awareness and recognition of the major factors (the so called value drivers) in the day-to-day business of a given company; the students must also be able to recognise those factors that are bound to cause a drain on liquid assets and a waste of scarce resources. Both modern and traditional methods of capital expenditure budgeting and of cost and activity accounting are presented and critically discussed, as it current developments in financial key figures and analysis systems. In individual learning activities students work with many practical examples and animations and consider the question as to how suitable today’s management and controlling models with their strong orientation toward the capital market, are (or are not) for small and medium-sized companies. Learning from the past for the future means that students learn to recognise and, as independently as possible, plan all steps that are considered necessary up to thorough value analysis. For this purpose the course provides practical knowledge of key figures and financial models to assess the monetary consequences of the varieties or options under discussion.
Basic Epidemiology

Leading House: University of Basel
Partners: Universities of Basel, Geneva, Lausanne, Zurich, Swiss Tropical Institute STI
Contact: Marco Waser, PhD, Marco.Waser@unibas.ch
URL: www.bepi.unibas.ch

Basic Epidemiology enables students to learn the basics of epidemiology on an individual and even playful basis. All lecturers in the fields of epidemiology or public health can integrate this course into their own lectures as a supplement or for more in-depth knowledge. The complete content of the course is available in German and French.

By means of more than 20 population-related and clinical case examples, the courses impart epidemiological thinking and communicate up-to-date, accessible national data sources while providing examples to practise their application. The modular structure of the course follows the textbook on Social and Preventive Medicine (Sozial- und Präventivmedizin).

As of the autumn semester 2008, the course Basic Epidemiology will be available to all lecturers at Swiss universities, at the SSPH+, in the Masters programmes and at the universities of applied sciences in the fields of epidemiology or public health.
CRANIONLINE – cranio-maxillofacial surgery

**Leading House:** University of Basel  
**Partners:** Universities of Bern, Geneva, Zurich, University of Frankfurt, Didavis AG Hägendorf, Instruct AG München  
**Contact:** Florian Thieringer, f.thieringer@unibas.ch  
**URL:** www.cranionline.ch, http://cranionline.unibas.ch

CRANIONLINE – cranio-maxillofacial surgery is a multimedia course that provides practical knowledge of maxillary and facial surgery. CRANIONLINE is used to complement the classroom lectures of students of dentistry and human medicine. The course is provided in modules and thus facilitates online studies that are independent of university lectures. The online course is based on three pillars consisting of texts and virtual lectures, realistic and problem-oriented patient cases, and a virtual practical session in the operating theatre. Here students can watch major maxillofacial operations «with the eyes of the surgeon». 3D-learning tools and animations facilitate the teaching of complex medicinal facts or problems on the field of maxillofacial surgery and the adjoining disciplines. When working on interactive patient cases (CASUS software), students are confronted with relevant questions (multiple choice, open questions, sorting tasks, laboratory values, etc.) relating to the subject at hand. The questions are then explored in extensive answers or experts’ comments.

The virtual course programme is supplemented by numerous additional modules, such as a 3D cranial model, a digital suture course or an x-ray image data base.
Dentistry meets e-learning

**Leading House:** University of Basel  
**Partners:** Universities of Bern, Geneva, Learntechnet University of Basel  
**Contact:** Dr. med. dent. Clemens Walter, OA, Clemens.walter@unibas.ch  
**URL:** www.zahnerhaltung.unibas.ch

Dentistry meets e-learning is an interactive, web-based learning platform at the university dental hospital for periodontology, endodontology and cariology (Head: Prof. Dr. Roland Weiger). The project serves to directly support the study programme (download of study materials) and facilitates the transference of clinical training to daily practice (interactive case presentations). The implementation took place in 3 modules.  
eFeed – Animal Feed Science Online

**Leading House:** University of Zurich  
**Partners:** University of Bern, Bern University of Applied Sciences, Swiss Federal Institute of Technology Zurich, Agroscope ALP  
**Contact:** Prof. Dr. Marcel Wanner, mwanner@vetphys.uzh.ch  
**URL:** https://www.olat.uzh.ch/olat/auth/repo/go?rid=64225282

eFeed is an interactive educational programme on the topic of animal feed; it is designed for students of veterinary medicine and agricultural science. However, eFeed is also an extensive reference work that describes in detail more than 600 individual feed types. This reference work is linked with the Swiss Animal Feed Database, thus ensuring that the information given on the nutritional value is continually updated.

eFeed has a modular structure, can be used in different learning scenarios and it is a unique reference tool for daily work. From the very beginning, the individual learning modules convey clear study goals and, along with a theoretical section comprise problem-based tasks which are meant to transfer theoretical knowledge to real-life scenarios. The modules also provide tests for self-evaluation of the learning processes.

Several European universities also use eFeed as a teaching tool.
E-GONE – Gynaecology, Obstetrics, Neonatology, Endocrinology

**Leading House:** University of Zurich  
**Partners:** Universities of Basel, Bern, Lausanne  
**Contact:** Prof. Dr. U. Haller, urs.haller@bluewin.ch  
Dr. M. Adé-Damilano, addamilo@egone.ch  
**URL:** www.egone.ch

The online learning portal EGONE (E-Learning Gynaecology, Obstetrics, Neonatology, Endocrinology and Reproduction) is a very highly developed model for medical students. The portal is an inter-university product and has proven its worth for several years in the curricula of the medical faculties in Zurich, Bern, Basel and Lausanne.

EGONE’s main objectives with regard to content are topicality and subject-related excellence: where pedagogical and didactical aspects are concerned, the objectives consist in an enhanced interactivity and communication between teachers and students.

At present EGONE offers 51 topics available as scripts (more than 600 DIN A4 pages), 350 commented illustrations and videos, and dozens of interactive exercises or case studies. An updated version is published annually.

In 2008, EGONE was taken over by the Swiss Society for Gynaecology and Obstetrics and divided into two sections:
- EGONE basic: subject matter for students attending the clinical semesters (Lausanne, Bern, Basel, Zurich)
- EGONE plus: subject matter for qualifying as a specialist in the framework of «logbook» and for skills enhancement for specialists.
Form@tox – Online Education in Addiction Medicine

Leading House: University of Lausanne  
Partners: Universities of Geneva, Zurich  
Contact: Dr Chantal Bochud Tornay, bochud.tornay@sunrise.ch  
URL: www.unil.ch/formatox

Use of psycho-active substances (tobacco, alcohol, illegal substances) and addiction pose a major challenge to public health. More and more, doctors are required to assume an important role in detecting, intervening and treating addiction-related disorders. A study conducted in 2002 at the University of Lausanne shows the necessity for doctors to acquire knowledge and expertise and to remain up-to-date on the subject. The main objective of Form@tox is to respond to needs in addiction medicine by introducing course modules that encourage interactive and problem-based learning methods and by developing courses on this topic for the regular curricula. In addition, Form@tox develops course models for postgraduate and continued education studies.
GPS – Gerontology: Psychiatric symptoms in older patients

Leading House: University of Zurich
Partners: Universities of Bern, Geneva
Contact: Pascal Py, Pascal.Py@bio-med.ch
URL: http://gps.bio-med.ch/

GPS fosters a blended learning approach to virtually work-up, diagnose and treat psycho-neuro-geriatric symptoms in elderly patients. The interactive multimedia presentations (video based patient and original medical data) convey realistic scenario. Based on the concepts of Problem-based Learning (PBL), the use of simulated/standardized patients allows demonstrating the results of clinical interventions and treatments. The PBL collections (French and German) cover a broad range of clinical situations. Together with the AD Learn project (Textbook and Case-based Learning portfolio), GPS offers a unique source of training material about Alzheimer’s disease and related disorders. GPS flexible simulator allows creating variations of a core clinical case to address respective learning situations such as continuing medical education. Its utilization spread out and PBL collection are also proposed for Immunology, Oncology, Laboratory Methodology, or AIDS vaccines evaluation.
Immunology online – Clinical Immunology Online: From organ to disease

**Leading House:** University of Lausanne  
**Partners:** Universities of Basel, Lausanne, Swiss Federal Institute of Technology Lausanne, HSeT Foundation  
**Contact:** Nathalie Debard, nathalie.debard@hset.org  
**URL:** [http://hset.bio-med.ch](http://hset.bio-med.ch) [institutional code: demo]

Clinical Immunology Online is a resource website that provides content and learning activities related to clinical immunology for medical students. The content is offered in English and covers numerous aspects of clinical immunology, including infectious immunity, inflammation, transplantation, allergy, tumor immunity and immunological disorders, accessible through case studies and annotated articles. Annotated articles offer an opportunity for trainees to familiarize themselves with the content and format of original scientific publications. Various tools have been created to help trainees to read and interpret the literature. These include guidelines for reading, evaluating and presenting the findings of an article, active links to specific pages of laboratory techniques or other relevant content, and an extensive glossary of terms. Case studies encourage independent learning and give learners practice in tackling puzzling situations and defining their own gaps in understanding in the context of relevant clinical problems.
PathoPedia

Leading House: University of Basel
Partners: Universities of Bern, Zurich
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URL: www.pathorama.ch

PathoPedia contains records of histopathological samples and allows students to examine the samples under a microscope at any time and place via the Internet. The combination with an interactive presentation tool creates a very vivid image of the virtual histopathological samples during the classroom lectures. During the course, students work in small groups and examine the samples under the microscope. To prepare for the examination, repetition of the course work can be done as independent study at home via the online histopathological course HiPaKu.
Physica pro medicis – Interactive Course On The Physics Of The Human Body

**Leading House:** University of Basel  
**Partners:** Universities of Bern, Fribourg, Geneva, Lausanne, Neuchâtel, Zurich  
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**URL:** [http://ppm.unibas.ch](http://ppm.unibas.ch)

Understanding the basic principles of physics is of great importance for practicing medicine. Due to time constraints, however, it is hardly possible for medical students to carry out experiments in this area during their studies. This is where the Physica pro medicis project comes in: e-learning modules simulate physical phenomena and experiments that cannot be presented as using traditional methods. The programme uses medical examples to illustrate and explain the basic principles of physics.

Physica pro medicis plans to combine face-to-face teaching and independent-study on the Internet. The modules will mainly be used in the first year of the course and be employed again in later years for detailed discussion of individual medico-physical concepts such as X-rays and MRI.

The Universities of Basel and Bern have already worked together to design the content of the new «Physics for Doctors» lectures. This means that there is a considerable supply of copyright-free modules available for further use.
SVAP – Swiss Virtual Animal Pathology

Leading House: University of Zurich  
Partners: University of Bern, Swiss Federal Institute of Technology Zurich  
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URL: www.animalpatho.org

Teaching veterinary pathology relies to a great extent on images and, under consideration of didactic principles, best takes an interactive approach. The SVAP is divided into the major sections of «Lecture» and «Trainer». «Lecture» facilitates the acquisition of knowledge while «Trainer» offers the means to apply or to test what has been learned. The target group primarily comprises the students in the introductory study period. «Trainer», on the other hand, was recognised by the European Society of Veterinary Pathology as the official website for pathologists who want to prepare for the entrance exam at the European College of Veterinary Pathology. Furthermore, the platform also intends to promote the development and continuing education of veterinary surgeons and agronomists (ETHZ). Further species-specific units are being prepared.
ViLab – A video-based, interactive learning system

**Leading House:** University of Basel  
**Partners:** University of Geneva, Swiss Federal Institute of Technology Zurich, University of Frankfurt  
**Contact:** Matthias Vogelsgesang, matthias.vogelsgesang@unibas.ch  
**URL:** https://www.p2.unibas.ch/ViLabs.php

The ViLab system is an essential component of the pharmaSquare p2 project and is used by students of pharmaceutical sciences within the framework of the test system PharmAskYou. ViLab – a video-based, interactive system for learning and testing, helps students to prepare virtually for sophisticated laboratory methods. There are three virtual interactive laboratories which deal with the biotechnological aspects of the practical exercises within the course «Modern Drug Design». Students prepare for fundamental lab procedures where various pharmaceutical disciplines intersect: SDS gel electrophoresis, Western Blot, safe working methods in laminar flow. Students receive feedback from a virtual assistant and thus will be prepared for practical laboratory work at a high cognitive level.
ARGUMENTUM – E-course of Argumentation Theory for the Human and Social Sciences

**Leading House:** Università della Svizzera italiana

**Partners:** Universities of Geneva, Neuchâtel

**Contact:** Sara Greco Morasso, sara.greco@lu.unisi.ch

**URL:** www.argumentum.ch

Argumentum is focused on argumentation, which concerns all those communicative activities in which the interlocutors are committed to give reasons for their decisions. As argumentation is necessarily an applied activity, each course is focused on the specific dynamics and strategies relative to each context: from financial communication, to institutional domains like family and school, to media discourse, to the sphere of the public debate, etc. Within these contexts, some specific issues are focused on, such as the psycho-social prerequisites for argumentation, the reasonable prevention and resolution of conflicts and the sociological implications of argumentation.

The objectives of the course cover the acquisition of skills in the analysis, evaluation and production of argumentative oral and written texts. Students have access to various communication tools as well as examples and case studies. The course provides a highly multilingual support (English, French, Italian and German).
CATCH – CommunicAtion Technologies for Cultural Heritage

**Leading House:** Università della Svizzera italiana  
**Partners:** Universities of Basel, Geneva  
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The world of cultural heritage (CH) is rapidly evolving: new technologies (like the Internet, the Web, mobile devices, 3D graphics, GPS, 3G cellular phones, etc.) offers new, unexplored ways to communicate content, both to professionals and to wide audiences. In this context, professionals with a background in Cultural Heritage, and knowledge in communication empowered by technologies, are heavily needed, worldwide, by subjects like cultural institutions, publishers, educational institutions, etc.

CATCH develops a blended learning course on the use of advanced communication technologies in cultural heritage. The target public are students in communication sciences, in computer sciences and cultural-heritage related disciplines. Important targets are also professionals in the cultural institutions, who already demonstrated interests in accessing learning courses on these topics.

**Leading House:** University of Zurich  
**Partners:** Universities of Bern, Lausanne, University of Duisburg-Essen  
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In the classes, students acquire hands-on experimental experience in core areas of experimental psychology such as Development, Emotion, Vision, Imagery, and Learning (DEVIL). DEVIL will help to achieve high levels of teaching and learning quality for a large student population by contributing innovative blended learning tools to maximize the efficiency of the courses. Therefore, the main goal of DEVIL is to optimize students’ acquisition of knowledge how best to independently plan, conduct, analyze, and present psychological experiments. The goal will be achieved by providing six equivalent modules for each of the five most important content areas for experimental research. The modules will allow tailoring preparatory and technical aspects of the experimental lab classes to the students individual needs. With the use of DEVIL, lecturers will be able to allocate more time to content-related classroom discussions because less time will be needed for organizational purposes.
DIGIREP – Digital Repository of Shareable Learning Objects
Introducing to Communication and Media Studies

**Leading House:** University of Zurich  
**Partners:** Universities of Bern, Fribourg, Università della Svizzera italiana, Zurich University of Applied Sciences  
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lic.phil. Katja Seifried, k.seifried@ipmz.uzh.ch  
**URL:** www.digirep.uzh.ch

DIGIREP is a digital repository of learning units that deal with the introduction to journalism and communication studies. DIGIREP offers students in foundation courses several possibilities to test their understanding of the subject and to improve their basic knowledge.

Online learning modules help students to acquire knowledge on the most important theories and subjects of journalism and communication science and learn subject-specific methods. A number of self-assessment tests allow students to check their level of knowledge. If students have difficulty understanding, they can consult introductory courses for answers to specific questions. Various case studies aid students in learning how to deal critically with topics and sources and also help students to acquire the skills required for scientific work.

DIGIREP is used in all participating universities and universities of applied sciences in the Bachelor programme. Certain subject areas are to be completed entirely in independent study, others are combined with courses at the introductory level.
**ECHO – E-course in Communication for Health Operators**

**Leading House:** Università della Svizzera italiana  
**Partners:** Universities of Basel, Lausanne, Scuola universitaria professionale della Svizzera italiana  
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**URL:** www.echo-net.ch/

ECHO exploits new media to develop learning methods which are best suited to health communication. This discipline is nowadays recognised as a fundamental element for the training of health operators generally: thus there is an urgent need of integrating it in curricula for medicine students, as well as to provide continuing education to health professionals. The topics of ECHO’s modules include theories and methods for the analysis and design applications of health communication at the personal and media levels, and by utilizing traditional and new technological communication channels. ECHO is available in English, French, German and Italian and is targeted to students of medicine, public health, health economics and communication, as well as to people already active in the field of health generally.
GLOPP – Globalisation and Livelihood Options of People living in Poverty

**Leading House:** University of Zurich  
**Partners:** University of Berne, Swiss Federal Institute of Technology Lausanne, International Labour Organization  
**Contact:** PD Dr. Norman Backhaus, norman.backhaus@geo.uzh.ch  
**URL:** www.glopp.ch

The e-learning project GLOPP focuses on poverty-related research and development put into the context of globalisation. Through its focus on the real life environments of people living in poverty, it deals with the actual situation of people affected by poverty and shows ways to research and in the end improve the situation. GLOPP aims to sensitize students to the living conditions of poor populations and to increase students’ familiarity with the complex nature of poverty. Both theoretical and methodical approaches will be discussed. There are exercises and self-tests for students to check whether they have achieved the learning objectives.

The main target groups are students at the Bachelor or Master level who are interested in development studies. In addition, the course is intended for people who work in poverty-related fields. GLOPP has a modular structure and was designed as a blended learning course. This makes it particularly suitable for integration into existing courses, as separate blocks can be individually incorporated and studied.
HEAR & SEE

Leading House: Università della Svizzera italiana
Partners: Universities of Bern, Fribourg, Lausanne, Neuchâtel, Lucerne University of Applied Sciences and Arts, SRG SSR idée suisse, Canal Alpha
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URL: www.hearandsee.ch

HEAR & SEE invites students of the Media and Communication Sciences to take an earful as well as a close look at the history and actual development of radio and television. The course modules span a hundred years, from 1905 to 2005, and do provide insight on classical topics such as radio and television history and analysis. But they also ask students to invest themselves with their own audiovisual experiences and competencies that are discussed, compared and further put to use within challenging hands-on exercises.

The goal of the course is to provide students with a reflexive stance that allows them to reassess their own everyday media use and helps them to develop a critical ear and eye for what lies behind the production, distribution and reception of audiovisual media content – yesterday, today and tomorrow.
I2C – Improving Intercultural Communication – A multimedia course in intercultural communication

**Leading House:** Università della Svizzera italiana  
**Partners:** Universities of Geneva, Neuchâtel  
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**URL:** www.i2c.ch

Parallel to increasing economic globalisation and growing international mobility, more and more jobs require a broader scale of intercultural communication skills. Although these skills cannot simply be summed up with a few pragmatic catchwords they include the following competences:

- An understanding of the mechanisms of communication and the psychological, social and cultural aspects that underlie the problems and the potential of intercultural communication and that form the basis of the major theories and concepts of intercultural communication in the various scientific disciplines.
- Adequate familiarity with the methods, instruments and communication skills that are suitable for intercultural communication.
- The ability to use these skills in a specific context: educational environment, in the media, in business, etc.

This project will present a course which, due to its interdisciplinary approach and the use of multimedia tools, will help to develop these three skills which are so urgently required in intercultural communication.
PPS – Political Processes in Switzerland

**Leading House:** University of Zurich  
**Partners:** Universities of Bern, Geneva, Lausanne  
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**URL:** https://www.olat.uzh.ch/olat/auth/repo/go?rid=792592424

PPS consists of an e-learning environment and a course that deals with decision making processes in the political system of Switzerland. The course lasts one semester and designed to supplement a basic lecture on Swiss politics. However, its modular structure allows other types of use as well.  
PPS uses three learning methods: problem-based learning using a case study, group work and mutual peer review. The course also includes literary studies, individual research activities and simple data analyses.  
The PPS learning environment is entirely bilingual (German and French) and it integrates existing data bases and archives from research institutions, official federal sources as well as a separate literature data base. A combination of individualised pages and general forums radically separates the act of learning from physical presence while at the same time a high degree of interaction and discussion is guaranteed.  
PPS expands with each course that is held. Case studies dealt with by students are saved in a database and can be accessed in future courses for comparative analyses.
PTO – Psychopathology Taught Online

Leading House: University of Zurich  
Partners: Universities of Basel, Bern, Fribourg, Geneva, Zurich, University of Salzburg  
Contact: Dr. Roland Streule, contact.pto@psychologie.uzh.ch  
URL: www.pto.uzh.ch/

Psychopathology Taught Online (PTO) is an award winning e-learning course of study with a focus on psychopathological disturbance patterns and selected topics from psychopathology. PTO can be used as a complementary e-learning option in the curricula in adult psychopathology. It can also be used in clinical psychology, psychiatry or courses for postgraduate continuing education. PTO may replace and/or complement classroom teaching (blended learning) and provides diverse possibilities for using the subject matter (German language) as a starting point for collaborative forms of teaching and learning. The concepts of learning theory are reflected in the didactic structure of the subject matter and their methodical implementation which – where this makes sense – are designed as multimedia and interactive applications. Please visit our website and watch our trailer, which introduces PTO in a 5 minute-clip: www.pto.uzh.ch/trailer.html
USABLE – USability Analysis through Blended LEarning

**Leading House:** Università della Svizzera italiana  
**Partners:** University of Bern, Scuola Universitaria Professionale della Svizzera Italiana, Swiss Federal Institute of Technology Lausanne, Swiss Federal Institute of Technology Zurich  
**Contact:** Prof. Lorenzo Cantoni, lorenzo.cantoni@lu.unisi.ch  
**URL:** www.usableproject.net/

The USABLE project develops a blended learning course on how to evaluate the usability of web applications. The target publics are students in computer science and communication sciences as well as professionals in the new media and electronic publishing industry. The course acts as a bridge for knowledge transfer from universities and scientific centers (where usability methods are mainly elaborated and validated) to professionals working in the new media industry (user experience designer, communication experts, interaction designers, web developers).
Viz.ch – An E-Learning Tutorial on Visualization for Communication, Engineering and Business («Visual Literacy»)

**Leading House:** Università della Svizzera italiana  
**Partners:** Universities of Geneva, St Gallen, Università della Svizzera italiana, University of Applied Sciences Northwestern Switzerland  
**Contact:** Prof. Dr. Martin J. Eppler, epplerm@gmail.com  
**URL:** www.visual-literacy.org/

This e-learning program focuses on a critical and often neglected skill for business, communication, and engineering students: visual literacy, or the ability to evaluate, apply, or create conceptual visual representations. After this tutorial, students should be able to evaluate advantages and disadvantages of visual representations, to improve their shortcomings, and to use them to create and communicate knowledge. The didactic approach consists of rooting visualization in its application contexts by giving students the necessary critical attitude, principles, tools and feedback to develop their own high-quality visualization formats for specific problems (problem-based learning). They learn about the commonalities of good visualization in diverse areas, but also explore the specificities of visualization in their domain (through real-life case studies). They will not only learn by doing, but in doing so contribute new training material for their peers to evaluate (peer learning).
EGGS – English through Game-based & Gender-oriented Scenarios

**Leading House:** Scuola universitaria professionale della Svizzera italiana  
**Partners:** Lucerne University of Applied Sciences and Arts, University of Applied Sciences Northwestern Switzerland, eLab USI/SUPSI  
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**URL:** www.mysterycove.ch

In the EGGS project a course has been created which aimed at the achievement of a high intermediate level of proficiency in the English language. Its peculiarity consists in the use of a «learning by playing» approach – thanks to the videogame structure – and the integration of the gender dimension into each aspect of the course.  
The videogame is composed of a short entry module and three episodes, which are built up around three different crime stories. The learner, in the role of the protagonist, will have to carry out exercises and activities that will both provide the necessary clues to move on in the story and allow a progressive improvement in language competence. The course will be integrated into a flexible blended learning modality.  
Special attention has been paid to the female and male contributions to the story and to a non-sexist, gender-sensitive language. Various types of exercises have also been introduced in order to meet the requirements of different learning styles.
eHistLing – Introduction to English Historical Linguistics

**Leading House:** University of Basel  
**Partners:** Universities of Lausanne, Zurich  
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The e-learning project eHistLing, which implements a blended learning approach, provides a new course format that can be easily transferred to other courses in the humanities.

- The CONTENT provided through in-class lectures is supplemented by a set of extensive online scripts and short online tutorials.
- Besides weekly face-to-face meetings, the major channels of COMMUNICATION are realized by a set of web-based discussion boards. Both, team owned private boards and discussion boards available to all course participants promote interaction on different levels.
- COOPERATION is introduced as the primary working process to consolidate knowledge. Lectures are discussed online, tutorial exercises are supposed to be hand in only after having been discussed in the corresponding board.
- The most innovative feature of this setup is the COLAC Model, which stimulates the process of ACADEMIC PUBLISHING (paper writing, review, presentation, expert discussion, publishing).
TransTech – Language Technology for Translators

**Leading House:** University of Geneva  
**Partners:** University of Zurich, Zurich University of Applied Sciences, Star AG  
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**URL:** www.issco.unige.ch/projects/transtech/

Translators must understand the basic concepts and methods of language technologies in order to appreciate the way these technologies work, to use them productively and to help shape their future development. The project was designed to develop and improve technology-oriented courses in the field of academic training, and also to help professional translators keep track of new developments in technology.

Web-based learning modules can provide this knowledge very flexibly, using a combination of real and virtual meetings and targeted exercises. The TransTech project focused on the development of expandable and adaptable translation technology modules to be used as an integral part of translation courses (for students and professionals) and in computational linguistics programs. These modules could also be deployed in service to tele-translation, a rapidly growing sector in its own right. Modules were developed for a range of topics relevant to language technology from basic ICT skills in a multilingual environment to dedicated tools and technologies for translators including machine translation. The project also served as a platform for collaboration in the related European projects eCoLoRe (http://ecolore.leeds.ac.uk), LT4eL (http://www.lt4el.eu) and MeLLANGE (http://mellange.eila.univ-paris-diderot.fr).
opOs – Open Planet of Sound

**Leading House:** University of Basel  
**Partners:** University of Zurich, University of Heidelberg, University of Innsbruck, Jazzschule Basel, Musikakademie Basel  
**Contact:** Raymond Ammann, Raymond.Ammann@unibas.ch  
**URL:** www.opos.unibas.ch (ab 2009 online)

opOs is a multimedia information system that integrates the different perspectives of music ethnology, brings them together and interlinks them to enable entirely different target groups to find a specific access to music ethnology. opOs has a modular structure and each module explores a specific problem of music ethnology. The course participants use interactive exercises to contribute to the solution of the question posed at the beginning of the module. Each module is subdivided in five sections that work with different didactic methods: from guided learning to discovering strategies. Some modules are open-ended, while other modules demand precise answers.
**Colore**

*Leading House:* Scuola universitaria professionale della Svizzera italiana  
*Partners:* Università della Svizzera italiana, Bern University of Applied Sciences, Lucerne University of Applied Sciences and Arts, Swiss Pedagogical Institute for Professional Education, Swiss Design Network  
*Contact:* Polly Bertram, polly.bertram@supsi.ch  
*URL:* www.coloreonline.ch

Colore is a joint project between three Universities/Schools of Art and Design. The project’s aim is to revive the teaching of colour-related subjects at the universities of applied sciences, but also in vocational schools and in the field of further education generally. Colore offers a range of tools that can be used in modular form in the various teaching environments. While one group of tools (e.g. physics, physiology or colour materials) offers a more general introduction to the subject, a second group deals with the job-specific aspects of the use of colour (e.g. in the fields of restoration, interior design, print or light art).

Students can acquire a general knowledge of the tools through illustrated introductions to the subject and interactive demonstrations, or in a (virtual) laboratory. Links providing structured access to extensive Web sources enable students to further explore particular themes.

Colore will be used in the following three main fields: in the Bachelor of Arts studies at the Schools of Art and Design, in teacher training (on individual aspects), in continuing education for professionals and for consultation by specialists who need a quick reference guide in a particular field.
D-net – Internet platform for teaching and learning basics of design

Leading House: Bern University of Applied Sciences
Partners: Lucerne University of Applied Sciences and Arts, Zurich University of Applied Sciences, University of Applied Sciences Northwestern Switzerland
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Use of multimedia tools and digital resources will most certainly enhance teaching design. Subject matter can be comprehensively visualised and students have the opportunity to work independently on a given theme.
The partners in the D-net project develop and test online learning environments that allow theoretical, historical and methodical approaches to design. Online materials complement classroom teaching and independent study in Bachelor programmes such as visual communication or product/fashion design. Digital resources and learning activities are designed to facilitate the acquisition of technical knowledge as well as improve application and methodological competences of students.

The project expands on the following components:
- Online Lectures: teaching material (texts), learning activities (self-tests, essay assignments, project analysis)
- Online Information: milestones, biographies, references and compilation of theoretical texts and opinions
- Online Multimedia Pool: collection of images
- Online Guidelines: introduction to tools for project analysis including examples and sample solutions as well as an introduction to academic methods.
RACOON – Restoration And COnservation ON Line

**Leading House:** Scuola universitaria professionale della Svizzera italiana  
**Partners:** University of Applied Sciences Western Switzerland, Bern University of Applied Sciences, Abegg Stiftung  
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**URL:** www.swiss-crc.ch/

The project allows to develop the collaboration activities in education and research established between the four institution that in Switzerland deliver a bachelor in Conservation and a master’s degree in Conservation Restoration. The 73 courses on-line are distributed over several disciplines including chemistry, science of materials, history of art, preventive conservation. Students can find through the common platform access to documents, links, videos and demonstrations, photos, slides and comments, forms, places opens for internships, evaluation tests. The materials on line are produced with the contribution of all the teachers involved in the Swiss CR Campus. The common platform enhances the exchange of competences between the schools, allows students to be coached during field work periods, improves the mobility of students through the different sites and to carry on personal research in specific fields of CR according to the different interests and needs.
BioSym – A Systems Biology Learning Network

**Leading House:** University of Zürich

**Partners:** Universities of Basel, Fribourg, Zurich, Zurich University of Applied Sciences, Swiss Federal Institute of Technology Zurich, Ruhr University Bochum, World Health Organization Geneva, Roche Basel

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BioSym modules are the basis for interactive biomodelling courses for understanding interrelationships in biological systems. Using quantitative models, the course introduces students to the mathematical description of complex interactions and to the methodology of modelling. The lecturers can combine individual modules to form entire courses that meet teaching and learning requirements. In BioSym courses, participants acquire the skills that enable them to develop models. BioSym courses use classical and dynamic models to introduce fundamental principles as well as modelling tools and their application. Courses for advanced studies deal with more complex stochastic models and offer support for planning quantitative experiments. Students also learn how to handle large data sets in models. The modelling training is based on MATLAB / SIMULINK und the Mathworks Toolboxes. The courses take place via the LMS OLAT.
BLIN – Blended Learning in Numerical Analysis

**Leading House:** Scuola universitaria professionale della Svizzera italiana  
**Partners:** University of Applied Sciences Western Switzerland, Zurich University of Applied Sciences  
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In the applied sciences it frequently happens to face complex mathematical problems as, for instance, the solution of a polynomial equation of 5th degree or the solution of a system of hundred linear equations. Usually such problems cannot be solved by hand. The aim of Numerical Analysis is to develop efficient methods (so-called algorithms), that can be implemented in a computer, in order to solve complex mathematical problems.

The scope of the project BLIN was to develop a set of modules for blended learning courses in numerical analysis oriented towards students in engineering and informatics curricula of the Universities of Applied Sciences. In particular we developed a set of graphical animations about some of the most fundamental methods of Numerical Analysis. A peculiarity of these animations is a step by step representation of the algorithms, showing simultaneously the graphical and the numerical interpretation of the solution process.
**CartouCHe – Cartography for Swiss Higher Education**

**Leading House:** Swiss Federal Institute of Technology Zurich  
**Partners:** University of Zurich, University of Applied Sciences Northwestern Switzerland  
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**URL:** [http://www.e-cartouche.ch](http://www.e-cartouche.ch)

CartouCHe provides a comprehensive overview of the fields of multimedia cartography and its application on CD-ROM, webbased applications and portable devices. The -CartouCHe content is multimedia-based and designed as stand-alone eLearning content but nevertheless it is mainly used in blended learning mode for colloquia, discussions, exercises within the curricula of the 3 participating universities. The whole project is built up by 3 modules: Multimedia and Web Cartography, Location Based Services, 3D Applications. These are educational components which bound a specific field of knowledge and lead to well-defined expertise and skills. Each module touches a number of methods and techniques as well as their applications. The entire course organization is modular down to the unit level (the choice of content to be integrated in a course can be made on this level). Tutors and students are using the web-based platforms for teaching and the respective software technologies for the exercises.
Develop your practical skills in biotechnology

**Leading House:** Zurich University of Applied Sciences  
**Partners:** Universities of Basel, Bern, Zurich, Zurich University of Applied Sciences, Swiss Federal Institute of Technology Zurich, Swiss BioteCHnet, Swiss Federal Institute of Aquatic Science and Technology  
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Biotechnology teaching imparts up-to-date industry-relevant contents, encourages the networking of biological and technical knowledge in process-oriented thinking and constitutes a link between the student’s own research measurement data and theory. Within the context of hybrid learning arrangements, the project partners draw up/create teaching modules for the planning, preparation, implementation, evaluation and interpretation of laboratory trials. Basic concepts of scientific work are explored in depth with a view to practical application, and time spent in the laboratory is used more effectively. The course design is based on a cyclical and/or logical sequence of interactive learning objects, in which explorative, project-oriented learning in teams is encouraged. Learning contents are assembled flexibly from a database with standardized, reusable learning objects. This technical concept makes it possible to prepare teaching materials by means of cross-media publishing and update them rapidly. The quality of the new course offering is assured by an advisory board and evaluated in Switzerland and abroad with the help of various user groups.
eMathematics

**Leading House:** University of Applied Sciences Northwestern Switzerland  
**Partners:** Scuola universitaria professionale della Svizzera italiana, Lucerne University of Applied Sciences and Arts  
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**URL:** www.emathematics.ch

eMathematics consists of application oriented, web-based modules in applied mathematics primarily meant for students of the bachelor degree programs in business studies at the Universities of Applied Sciences. The didactical structure of eMathematics is based upon the following six phases: preparation, active learning, visualization, reflection, self-evaluation, and exploration. Interactivity, its key feature, is ensured at various levels by including instant guides, flash-based in-depth guides, enhanced podcasts, simulation tools as well as games and quizzes. Reusable templates are used to create the games and puzzles making them flexible and adaptable to any topic of choice. The major added-value of eMathematics is that it is a course suitable for self-study purposes. Motivation for learning is provided by presenting the learning material in a clear, informative, instructive and interactive manner with ample opportunities to explore what is learnt. Thus learning mathematics becomes a truly enriching experience!
eSCENARIO – Scenario based problem solving in natural hazard management

**Leading House:** Swiss Federal Institute of Technology Zurich  
**Partners:** University of Bern, Swiss Federal Institute of Technology Lausanne, Geotest AG  
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**URL:** www.nathaz-management.ethz.ch

eSCENARIO is course in scenario based problem solving that uses interactive case studies in the field of natural hazard management. The course provides an opportunity for students to develop interdisciplinary skills in applied natural hazard and risk assessment for a range of hazards that include landslide, rock fall, debris flow, snow avalanche, flood and earthquakes. Students gain an overview of natural hazard investigation, mitigation and risk assessment through an active learning approach, which fosters the motivation for students to formulate problems, ask important questions, and provide solutions that are relevant to society concerning integral natural hazard management. eSCENARIO is an introductory level course for Bachelor and introductory Masters level in Earth Sciences, Civil Engineering and Forestry Engineering currently offered at the partner institutes.
The origin and the history of life can be reconstructed and professionally taught only in an interdisciplinary effort between paleontologists and biologists. However owing to the traditional disciplinary separation between Bio- and Geo-Sciences this effort has not been already addressed in low level teaching.

So we’ve produced a course that proposes a central, step-by-step learning process adapted for self-study at Bachelor level in Bio- and Geo-Sciences. The geologic time is the central «red thread» from the birth of the Universe to the present. The course is built of General Modules and is flanked by Bio- and Geo-Tools that present specific methods used in biology or geology. In addition, different tools (glossary, geological time scale and an interactive periodic table) assure a general scientific background that can be accessible anytime. Image collections, animations, animated models allow the student to discover the different aspects of evolution.
PRESS – Plant Responses to Stress

Leading House: University of Zurich
Partners: University of Basel, Swiss Federal Institute of Technology Zurich
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URL: www.plantresponse.uzh.ch

The Zurich-Basel Plant Science Center offers a unique series of lectures on the subject of Plant Response to Stress (PRESS). The lectures present expert knowledge in a contemporary and very lively research field as part of a Masters programme. Plant Response to Stress is an ideal subject for taking an interdisciplinary approach to plant sciences as molecular biologists, plant physiologists, agricultural scientists and ecologists all research in this area. Students can familiarise themselves in independent study via the online distance learning course, independent of time and place. The online course is then immediately followed by a blended learning seminar.

These lecture series promote the horizontal mobility of students as well as inter-university academic teaching. The courses are embedded in the Master’s Studies and Master’s Courses Plant Sciences programmes, which are maintained by 8 institutes and three Swiss universities (the Universities of Zurich and Basel, ETH Zürich). The programme’s objective is to offer extensive education in Plant Sciences that is open to students of all Swiss universities.
CasIS – Cases in Information Systems

Leading House: University of Zurich
Partners: University of Lausanne, Swiss Federal Institute of Technology Lausanne, Swiss Federal Institute of Technology Zurich
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Cases in Information Systems (CasIS) was a joint project of the Universities of Zurich and Lausanne and the Swiss Federal Institutes of Technology in Lausanne (EPFL) and Zurich (ETHZ). During the course of the project from January 2006 to July 2008, four multimedia case studies that were produced in cooperation with well-known companies, an online entrance test, preparation modules, and a toolbox are developed and implemented. CasIS targets students on master level and aims to meet higher learning objectives like problem-solving and decision-making.
CoreITeM – Core IT Mathematics

**Leading House:** University of Zurich

**Partners:** Universities of Basel, Fribourg, Swiss Federal Institute of Technology Zurich

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John Weissmann, jody@ifi.uzh.ch

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Core IT Mathematics is an e-learning course which is suitable both for complete self-study and for blended learning environments. It covers those mathematical core areas that are particularly important in information technology, but that are often only poorly represented in university teaching.

In the form of more or less self-contained modules the course covers the following subjects: set theory, numbers, graphs, algebra, logic, grammars, machines, linear geometry, calculus, ODEs as well as special subjects such as fractals, neuronal networks, Fourier, wavelets, numerics, statistics, categories and manifolds. Advanced subjects such as flowpoint arithmetics, L-systems and multimedia mathematics further increase in-depth knowledge.

Apart from a full text version, each module also contains keyword screens which are suitable for projection with a beamer. In addition, numerous examples, illustrations and interactive elements will supplement the course material.
The DLOB project is not an effort to reorganize existing teaching material in yet another database course.
Rather, the focus of the DLOB project is on tools that can effectively help students learn (and lecturers teach) better and faster. These include interactive tools, with which students can work to design data structures, simulate design processes (E-R to relational to SQL) and behaviours (B+ tree indexes in a RDBMS), and animations, that help demonstrate key concepts (referential integrity, joins, transactions, distributed queries, ...) in a visual fashion.
The tools are suitable for students and lecturers alike, for use in Universities, either in presence or in blended delivery scenarios.
Particular attention was paid to developing modular (very loosely coupled) objects, so as to allow their independent reuse in existing or new courses, as the need may be.
The interactive stand alone tools are all Java based and their source code made available under GPLv2.
FABEL – Fallbasierte Einführung zu e-Learning

**Leading House:** Bern University of Applied Sciences  
**Partners:** Universities of Bern, Fribourg, University of Applied Sciences Eastern Switzerland  
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A decisive factor in the success of media-aided teaching is the availability of practical courses to provide high-quality training for teachers. The FABEL project delivers the theoretical and practical basics of media-aided teaching in a blended learning setting geared to modern principles of case-based and situated learning, in order to avoid dull presentations.

Course participants acquire the basic knowledge necessary for successful media-aided teaching by dealing with complex, realistic cases. The extensive experience gained over many years of counselling teachers in the didactics of media-based courses can be drawn upon to construct these cases. At the end of the course, participants are confronted with a concrete project to develop themselves: they have to apply the newly acquired knowledge directly to their own teaching. Initially, they are given more structuring aids and tasks when dealing with the cases. Course participants work and learn individually and in groups with the help of new technologies.

A Web platform is employed for presenting case studies and tasks. The necessary basic knowledge is made available online through a document management system which enables users to retrieve dynamically generated knowledge queries.
FOIS – Foundations of Information Systems

Leading House: University of Zurich
Partners: Universities of Bern, Lausanne, St Gallen, University of Applied Sciences Northwestern Switzerland
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URL: www.fois.ch

FOIS develops multimedia modules for independent learning as well as supporting materials for classroom teaching.
FOIS learning contents have been designed for students of the Bachelor programme in economics.
FOIS learning modules can be combined individually and flexibly by lecturers.
Lecturers holding introductory courses in business informatics are frequently confronted with similar problems: crowded classrooms, lecture-style teaching, and hardly any direct contact with the students.
Quality: FOIS learning modules are developed by recognised experts on the subject under consideration of didactic guidelines and undergo regular measures of quality assurance.
Practical applicability: FOIS learning contents are immediately used in teaching, evaluated and continually adapted and improved.
Open Content: FOIS learning modules can either be developed or modified to meet individual requirements.
Sustainability: Quality assurance, continual development and integration into the courses or tutorials guarantee that FOIS products continue to be used even after project completion.
FPM – Programming fundamentals

**Leading House:** Università della Svizzera italiana  
**Partners:** University of Zurich, Scuola universitaria professionale della Svizzera italiana  
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The Fundamental Programming Modules supplement basic programming courses in a blended learning environment. They can be adapted also to courses where entry levels of students and their learning objectives are quite different, for example to beginning courses of programming that consist of students both from informatics and from other technical domains requiring programming skills. A Pre-requisite Technologies Module covers tools and environments (Emacs, Unix, CVS). Different modules cover basic informatics topics in general (algorithms, data, control, encapsulation, testing and debugging) with specific submodules for the Java and Scheme languages. The modules contain animations and test questions to help student learning. The modules are appropriate for first programming courses that use either Scheme or Java. They may be used in courses for other languages if the instructor provides examples in their own language.
IT/IM Online – Information- & IT-Management online

**Leading House:** University of Applied Sciences Northwestern Switzerland  
**Partners:** University of Basel, Bern University of Applied Sciences, Boston College  
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IT (Information Technology) and IM (Information Management) are taught as a mandatory subject in the curriculum of business students at the University of Basel, UAS Basel and UAS Bern. The aim of the project was to provide an integrated platform to enhance these courses by teaching and applying newest research findings with sophisticated pedagogical methods and the appropriate media therefore needed. Therefore, a team of experts joined, which combined state-of-the-art research in e-business, e-learning didactics, -technology and -management.  
The courses support blended learning scenarios: Traditional classroom teaching and e-learning components were adjusted to support self-guided learning and collaborative learning in form of various pedagogical methods in the same course.
**OS Lab – Operating Systems Laboratory**

**Leading House:** University of Berne  
**Partners:** Universities of Fribourg, Neuchâtel  
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**URL:** www.oslab.ch

Operating systems are the fundamental part of every computing device to run any type of software. The increasing use of computing devices in all areas of life (leisure, work), lead to a variety of operating systems. Yet all operating systems share common principles. These principles are important for computer science students in their understanding of programming languages and software built on top of operating systems. The Operating Systems Laboratory (OSLab) is an online course teaching students about principles of operating systems using a constructivist approach and problem-oriented learning. OSLab focuses on the hands-on training experience of students and will complement existing lectures. The course is structured into modules, where each module covers a topic and is in itself closed. A teacher can select modules according to his need and easily add new modules to the course. During this project we developed learning modules on the topics of process scheduling, inter-process communication, memory management, file systems, distributed file systems, security as well as device drivers and input/output.
Understanding 3D

**Leading House:** University of Geneva  
**Partners:** University of Basel, Swiss Federal Institute of Technology Zurich  
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The main goal of the project is to provide students, by means of the exploitation of a «learning by experience» strategy, with interactive 3D content in order allow them to directly experiment the main theoretical concepts pertaining to 3D Computer Graphics. While a large amount of valuable educational content is currently available online, such didactical material is however disseminated and disconnected. Therefore, such information has been evaluated and collected in order to constitute an integrated online course. Furthermore, an adaptive framework, based on an open scenegraph library that gives access to all standards 3D features, has been developed in the frame of the project to enable the rapid prototyping of interactive online experiments. The result is a flexible online 3D environment, which allows the creation of interactive components, each targeting a specific concept through a simplified and focused user-interface, in order to facilitate the students’ learning experience.
EAD – Ecology in Architecture Design

**Leading House:** Università della Svizzera italiana  
**Partners:** University of Geneva, Scuola universitaria professionale della Svizzera italiana, Lucerne University of Applied Sciences and Arts, University of Applied Sciences Eastern Switzerland  
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Intended primarily for students of architecture, the course is divided into two broad parts, one is devoted to the building and the second to the territory. Each comprises six modules: water, air, earth, energy, population, and climate (for a total of 12 modules). Ecology is defined as broadly as possible, and covers the environmental components (earth, water, and air), interaction with the climate, the dynamics of the population and energy flows. The aim of the EAD project is to create ‘blended’ eLearning courses, where students and future practitioners are handed the necessary instruments allowing the full and scientific integration of ecological issues into the architectural design. This sort of approach is suitable for schools of architecture, where it is difficult to integrate energy-environmental issues into laboratory activities.
Reading and writing skills – Advancement of reading and writing skills of engineering students at UAS

**Leading House:** University of Applied Sciences Eastern Switzerland

**Partners:** Scuola universitaria professionale della Svizzera italiana, Zurich University of Applied Sciences, University of Applied Sciences Eastern Switzerland, University of Applied Sciences Northwestern Switzerland, Hochschule für Heilpädagogik Zürich, Pädagogische Hochschule Graubünden

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This blended learning project aims at encouraging young adults to further develop their reading and writing skills. The learning units focus on reading and writing in the context of academic studies or professional life. The course comprises classroom teaching, self-study units and practical tutorials. It addresses the students of engineering courses in Universities of Applied Sciences. Interactive, multimedia e-learning units motivate students to examine kind of texts. Students must be convinced that working on their own writing is not only decisive for their personal learning success but also for their later professional career. Because instructors are active in the course modules, their awareness of the importance of reading and writing in their subject area is enhanced. They, too, can adjust their writing habits, leading to more effective teaching and learning.
TEMAS – experimental TEmhniques: MAterials and Structures

Leading House: Scuola universitaria professionale della Svizzera italiana
Partners: Università della Svizzera italiana, University of Applied Sciences of Western Switzerland
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In the frame of both Bachelor and Master Engineering and Architectural studies, it is fundamental to provide the students with practical and technical preparation in mechanical characterization of structures and materials. Effective teaching for such a topic requires direct experience, in order to see the real effects of forces both on materials and structures. TEMAS is an online repository of Learning Objects of tests on materials and structures. Each Learning Object is centered around an experimental test on the mechanical behaviour of several materials and different types of structures, including:
- theoretical introduction
- description of the test
- video clip
- standards references
At the end of each unit a self-evaluation test is inserted.
Four fundamental topics have been developed:
- Mechanics of Materials
- Materials
- Structures
- Special Cases
The database is regularly updated by the experiences carried out both in the different laboratories of international and Swiss universities.
The projects of series 3 and 4

GF – Gymfacts

Leading House: University of Basel
Partners: University of Berne, Bern University of Applied Sciences, PHTG
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www.gymfacts.ch
http://eva.unibas.ch/issw

The following products were designed or extended in connection with Gymfacts:

Online Tool «practical tests»: this tool sets standards for presenting practical tests in the professional training of sports experts. It uses multimedia tools to define and describe learning objectives and criteria for examinations and supports students in the objective assessment of their performance.

Digital learning materials: as part of their semester assignments or Masters papers, students compile modern digital teaching materials that have been coordinated and tested by experts from the ISSW (Institute of Sport and Sport Sciences). Partners contribute to course content in keeping with the cooperation contracts.

These developments combined with the introduction of the Bachelors and Masters programmes put parts of sports education on entirely new ground: a) improved flow of information at the ISSW thanks to a permanent online access; b) instructors are relieved of a part of their workload and independent study is promoted through the creation of high quality teaching materials; c) products from the institutes (developed by students) will have an effect beyond the institute.
Learning Pacemaker is a stand-alone solution for compiling case studies or similar learning sequences that are built up step by step. Learning Pacemaker is suitable for structuring complex learning contents.

Learning Pacemaker is the product of interdisciplinary work and is used by engineers in the Finite Element Method, for case studies on communication skills in education sciences and social work, in education-related topics, and in the business world for decisions related to optimising operations. These applications are suitable for guided independent study. Case studies present the subject matter in a coherent way, thus facilitating the transfer of knowledge.

A unique feature is that course distinctly shows the steps leading to students’ personal solutions and depicts their learning and problem solving behaviour.

Learning Pacemaker reflects on-the-job conditions very closely and is therefore suitable for use as a counselling tool for projects at the workplace or for other counselling purposes.

The project development was recognised by EASA and Medidaprix.
eTeach-Net – E-Teaching Network for Training and Support

**Leading House:** University of Geneva  
**Partners:** Universities of Basel, St Gallen, Università della Svizzera italiana, Scuola universitaria professionale della Svizzera italiana, University of Applied Sciences Western Switzerland, Bern University of Applied Sciences, University of Applied Sciences Northwestern Switzerland, Swiss Federal Institute of Technology Zurich  
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The objective of this small distributed project was to develop reusable teaching modules and materials about technical, pedagogical and didactic concepts of e-teaching. These modules and materials are integrated into several postgraduate curricula and continuous training offers. Target populations include engineering educators, students in educational technology, students in information technology and management, scientific university staff and pedagogical/technical support staff.

Topics covered include: general introductions to e-learning, overviews of instructional design methods and models, collaborative virtual lab environments, multimedia techniques, authoring of e-contents, design and management, tutoring and collaboration, action learning and problem based learning, project-oriented learning, strategy and quality, and e-learning technologies.
LWM – Learning with UAS Working Methods

**Leading House:** University of Applied Sciences Western Switzerland  
**Partners:** University of Applied Sciences Western Switzerland, Zurich University of Applied Sciences / Fachhochschule Westschweiz, Zürcher Fachhochschule  
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ask: bernard.cretenand@hes-so.ch to get an access

Learning and working at UAS request from students adapted learning competences mainly organized in four fields: 1/ concrete experimentation; 2/ collaborative working and learning; 3/ concrete and applicable developments devised with a strong sense of innovation; 4/ professional writing and editing.  
Students attending UAS institutions present different profiles, levels and previous learning experience. Profiles are increasingly more heterogeneous in age. Students’ learning methods are often not fully adapted to the UAS requirements in term of self organization, peer collaboration, writing or improvement of their own learning strategies, methods or tools.  
The online course «Learning at UAS-Working Methods (LWM)» proposes a distance course attended by any future UAS student. Supported by active tutors, this course is based on collaboration between learners. Situational videos are offering a concrete sight on the UAS culture and help students to integrate it.
M^3 online / ICT online – Unterstützung von Modulen in Grundlagenfächern durch E-Learning

**Leading House:** Lucerne University of Applied Sciences and Arts
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**URL:** M^3 online (HSLU): [http://elearning.hslu.ch/lilias/wiki.php/hslu/hilfe/Projekte](http://elearning.hslu.ch/lilias/wiki.php/hslu/hilfe/Projekte)

This joint project has two different levels: the metaproject level – which describes the full framework of the project and is relevant for the call for tenders, the selection of projects and project completion – and the level of the actual e-learning projects with the following subprojects:

**M^3 online** (HSLU): Online teaching materials on management modules.
Several modules of management training provided by HSLU Wirtschaft will be didactically supplemented by e-learning materials. The three dimensions of M^3, the Lucerne’s approach to management, will have learning objects with test units, a distinct advantage over scripts.

**ICT online** (HES-SO): Online teaching materials related to modules on tele-informatics.
This is a blended learning module for introducing the subject of tele-informatics to the bilingual Bachelor courses on computer science and tele-communication at the universities of applied sciences. It is characterised by interactive course material and an integrated virtual laboratory for analysing all important communication protocols.
Studycube2 – A powerful tool for quality in scholarly work and success in learning

**Leading House:** University of St Gallen  
**Partners:** Universities of Basel, Zurich  
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**URL:** www.studycube.ch

By providing video clips, audio statements, interactive contents and opportunities for self-testing, studycube enables students to actively and realistically consider interdisciplinary competences. As a part of the SVC project, the University of St. Gallen (Institut für Wirtschaftspädagogik), the University of Basel (Institute of Sociology) and the University of Zurich (Institut für Gymnasial- und Berufspädagogik) cooperated to further develop the contents of studycube. Along with substantially improving the studycube design, new multimedia content was developed, a decisive improvement for students in their studies. At the Universities of St Gallen and Zurich studycube will continue to constitute an essential component in the lecture «Learning and Academic Work» on the level of assessment. The University of Basel has integrated studycube into the course «Introduction into Empirical Social Research I/II». 
The mandates of the SVC Consolidation Phase

The federal programme «Swiss Virtual Campus» saw fit to set up a viable framework to guarantee that it would grow and develop optimally. The framework comprised services or questions within the programme that concerned operational strategy, didactics and pedagogy as well as technical issues. These services were offered in the form of mandates.

The mandate results can be downloaded from the Swiss Virtual Campus website⁹.

**CritiQuest**
University of Lausanne
Dr. Nadia Spang-Bovey

The core purpose of this mandate was to provide project leaders and staff in the competence centres with resources that enabled critical reflection on the project for its entire duration. This implies that planning and decisions can take place at all levels (didactics, technical and managerial levels) and that problem detection and diagnosis can be facilitated. In addition, the effectiveness and efficiency of collaboration between competence centres and project leaders can be enhanced. In cooperation with many Swiss institutes of higher education and other mandates, this mandate has recorded the most frequently asked questions and problems in eLearning projects and has developed and documented relevant solutions.

The persons responsible for the mandate created an applicable online tool on their own initiative.

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⁹ [www.swissvirtualcampus.ch](http://www.swissvirtualcampus.ch)
[www.crus.ch/information-programme/swiss-virtual-campus/resultate.html](http://www.crus.ch/information-programme/swiss-virtual-campus/resultate.html)
The mandates of the SVC Consolidation Phase

EDUTECH
University of Fribourg
Dr. Gérald Collaud, Dr. Jacques Monnard

The mandate’s objective was to provide the SVC with technical support. Its tasks included direct technical project support, evaluating eLearning platforms and advice on the choice of national server structures. The mandate contributed considerably to developing the infrastructure of authorisation and authentication processes (AAI – a former SVC project, now a SWITCH project) and supported efforts to integrate national server solutions in AAI and to carry out necessary migrations. The mandate coached administrators and the persons responsible for the projects, provided information resources on its website, conducted thematic workshops, events, surveys and analyses. Additional tasks of the mandate included (technical) layout and maintenance of the SVC website and supporting the coordination team in publishing and supervising news, events and updates.

FNL – Forum New Learning
Bern University of Applied Sciences
Prof. Dr. Andreas Ninck

The core purpose of the mandate was to design the layout of a competence network with the goal to develop and direct a «Community of Practice». The mandate focussed on Community Management and know-how exchange among the various competence centres. Its sphere of action covers all Swiss institutes of higher education. Today, Forum New Learning operates independently.

GIRAFE
University of Geneva
Prof. Dr. Daniel Peraya

The goal of this mandate was to support and advise initiatives that intended to integrate new technology into academic teaching, independent of their orientation or institutional basis. Its main focus was to present the results of the cooperation between the individual partners of SVC projects and the InterSTICES group (SVC mandate of the impulse programme). The mandate, which comprised a network of the competence centres from the Universities of Geneva, Fribourg, Lausanne and Neuchâtel, was also open to all institutions of academic lecturers as well as to other networks in the field of university-level education.
Guide to e-Learning Good Practices
University of Lausanne
Prof. Dr. Maia Wentland

The mandate was established to evaluate best practices of successful e-Learning in selected countries, to compare them with the experiences made with SVC and to thus provide input for the future design of virtual teaching or learning. After comparing the results of the evaluation with the experiences of the SVC, the mandate compiled a Guide to e-Learning Good Practices. The guide contains important suggestions and proposals that can contribute to improving the quality of teaching and learning and that support the e-Learning community in its efforts towards sustainability, integrating e-Learning contents curricula and in questions on strategy and university policy.

National Platform for Online Courses
Joint mandate of EDUTECH-SWITCH
University of Fribourg, Dr. Gérald Collaud, Dr. Jacques Monnard
SWITCH, Dr. Martin Sutter, Dr. Rolf Brugger

The goal of this mandate was to guarantee that the SVC community receive a Learning and Content Management System (LCMS) or an eLearning Platform in the form of a national platform. Within the framework of the mandate, a licence was acquired for a commercial platform and an open source learning object repository was developed. As part of its eLearning services for Swiss institutes of higher education, SWITCH will continue operating the existing systems, observe further developments in the market and make the best possible offers available to the community.

Online Handbook on Evaluation of eLearning Projects and Programmes
Swiss Federal Institute of Technology Zurich
Prof. Dr. Theo Wehner, Dr. Verena Friedrich

The mandate focused on developing an instrument to facilitate the evaluation of eLearning projects and support programmes. The mandate compiled an online manual for evaluating projects and programmes; the manual provides tools for collecting, analysing and integrating evaluation data on various (eLearning) projects, thereby enabling strengths and weaknesses to be identified.
The target groups of the online manual encompass academic lecturers (project users), the staff of eLearning competence centres (project advisors) and, finally, the directors and employees of eLearning competence centres (programme evaluators).

**SVC Measures and Initiatives Support**  
Coordination Swiss Virtual Campus

This mandate’s goal was to prepare the projects and competence centres for the challenges expected to arise after the federal programme’s completion: ensuring the sustainable use of eLearning products and services within the institutes of higher education, the transfer of know-how from one institute to the other, the identification of additional options for use in an academic environment, but also the appraisal of chances and options for utilisation and marketing outside the university environment (e.g. in partnerships, cooperation with educational institutions, companies, etc.) and the active participation in international networks. The mandate organised several workshops and reported their results in a publication.

**SVC Status Reports and Projects Monitoring**  
University of Zurich  
Prof. Dr. Jürgen Oelkers, Dr. Cornelia Rizek-Pfister

The purpose of this mandate was to use quantitative and qualitative analyses to compile an overview of the status of the various projects after the SVC impulse programme was completed and, in addition, to make recommendations to the SVC steering committee. The mandate conducted extensive interviews for this purpose. The comprehensive results of the mandates, including detailed descriptions of the projects from the impulse phase, will prove to be a valuable source of information for further analyses.

**Sustainable Implementation of eLearning**  
University of St Gallen  
Prof. Dr. Dieter Euler, Prof. Dr. Sabine Seufert

The mandate’s activity focused on advising the SVC steering committee on questions and issues concerning strategy. The mandate also provided the SVC coordination team with advice and operative support regarding the preparation, realisation and follow-up of the
SVC Days 2006. The mandate concentrated on analyses and recommendations in relation to a possible continuation of the SVC beyond 2008 as well as on analysing the status of the competence centres and issuing relevant recommendations.

Part of the mandate’s activities included writing a report that can serve as a guideline for a sustainable development of eLearning as seen from the perspective of eLearning project leaders, the competence centres and decision makers involved in university policy.
Swiss Virtual Campus

Consolidation Phase – 2004-2008
CCSPs, projects and mandates
Overview