Sicherheitsverbund Schweiz
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Rete integrata Svizzera per la sicurezza

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Swiss tertiary-level training programmes in cyber field

The following list is not exhaustive. The contact form may be used to add any cyber training that is not listed in this document.

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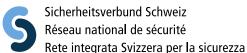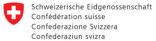armasuisse Science and Technology
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HIGHER EDUCATION SECTOR (FITs, UAS AND CANTONAL UNIVERSITIES)

Bachelor programmes

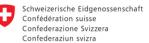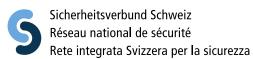| Institution	Degree/Certificate	ECTS credit points/Duration	Description
École Polytechnique Fédérale de Lausanne (EPFL)	BSc in Computer Science	180 ECTS credit points, 3 years	This Bachelor's degree programme allows students to understand the intricacies of technology and how it can be used to solve problems.
	BSc in Communication Systems	180 ECTS credit points, 3 years	While the world shaped by communication systems seems easy to grasp, a real command of this subtle universe is both complex and fascinating. To study communication systems is to stand at the very crux of societal challenges.
Eidgenössische Technische Hochschule Zurich (ETHZ)	BSc in Computer Science	180 ECTS credit points, 3 years	ETH Zurich offers a broad, high-quality bachelor's degree programme that serves as an excellent foundation for future work in computer science or one of its many associated fields. It teaches an essential knowledge of mathematics and electrical engineering as well as the basic principles of computer science.
Fachhochschule Nordwestschweiz FHNW	BSc in Computer Science – iCompetence study programme	180 ECTS credit points, 3 years	iCompetence is a specialism option within the Bachelor's degree programme. It combines computer sciences with design and management.
Haute école d'ingénierie et d'architecture de Fribourg HEIA-FR	BSc in Computer Science and Communication Systems	180 ECTS credit points, 3 years	This Bachelor's degree programme adopts a holistic approach allowing future engineers to understand the impact of information technologies on organisations.
Haute École d'Ingénierie et de Gestion du Canton de Vaud HEIG-VD	Bachelor's degree in Computer Science and Communication Systems - Specialisation in IT Security		Cybersecurity is a crucial element in the digital transformation of our societies. The focus on information security provides engineers with advanced security skills as well as a corresponding 'attack-defence' vision of computer systems. These specialists analyse the computer security of complex systems (threat analysis and penetration tests), design secure

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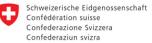|			architectures, select and develop adequate protective measures.
Haute école du paysage, d'ingénierie et d'architecture de Geneva (HEPIA)	Bachelor's degree in Computer Science and Communication Systems - Specialisation in IT Security	180 ECTS credit points, 3-4 years	In a constantly evolving field, this study programme is designed to meet the current and future needs of professionals. Through analysis of problems and the development of concrete solutions, it enables students to develop generic and transferable skills. Starting in the second year, students can specialise in a specific sector by choosing one of five possible areas of specialisation.
Hochschule Luzern (HSLU)	BSc in Information and Cyber Security		Megatrends such as digitalisation, Industry 4.0 and the Internet of Things (IoT) cause an ever-growing demand for experts in the field of information security. This new Bachelor's degree programme closes this gap and provides the specialist skills and knowledge necessary to build and operate secure IT infrastructures. In the programme, students learn to work with sensitive data as well as product and process secrets and acquire the skills to support the IT security efforts of companies and public institutions to protect critical infrastructures. Students learn how to handle sensitive data along with product and process secrets and are able to help companies and public institutions to protect critical infrastructure.
Universität Basel (UNIBAS)	BSc in Computer Science	180 ECTS credit points, 3 years	This Bachelor's degree programme includes a mandatory course 'Internet and Security' (8 ECTS) and mandatory course 'Computer Architecture and Secure Computing' (expected to be launched in 2021) (6 ECTS)
	BSc in Computer Science/Informatik	180 ECTS credit points, 3 years	This Bachelor's degree programme at the University of Basel offers an application-oriented, modern education in computer science with a sound basic knowledge of mathematics. It gives its graduates the opportunity to apply their knowledge in a broad professional field in business and government, but also provides the theoretical tools needed to engage in research. During their studies, students learn to systematically analyse problems and independently develop solutions using

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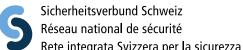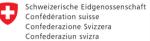|			information and communication technologies. The programme places emphasis on teamwork and presenting IT solutions.
Universität Bern (UNIBE)	BSc in Computer Science	180 ECTS credit points, 3 years	This Bachelor's degree programme provides a broad basic education covering the main computer science topics. We give importance to imparting an understanding of basic theory and acquisition of the skills needed to solve practical problems. A major in computer science can be flexibly combined with several minors in other subjects.
Université de Fribourg (UNIFR)	BSc in Computer Science	180 ECTS credit points, 3 years	Studying computer science at the University of Fribourg provides solid theoretical knowledge and practical experience. Indeed, students learn about computer science in a relaxed atmosphere by solving specific problems. Each semester, students carry out a project. In this way, they learn to apply their knowledge in various contexts. Current projects include robotic programming, process control, the use of different programming models, and the development of multimodal web applications. In addition to the main study programme in computer science, there are secondary study programmes that can be freely chosen from the other academic fields offered by the University of Fribourg.
Université de Genève (UNIGE)	BSc in Information Systems and Service Science	180 ECTS credit points, 3 years	This Bachelor's degree programme offers solid basic training in the field of information systems engineering and digital services. The aim is to provide the keys to understanding today's digital services in order to design those of tomorrow.
	BSc in Computer Science	180 ECTS credit points, 3 years	This Bachelor's degree programme includes the mandatory courses 'Cryptography and Security' (5 ECTS) and 'Software and Computer Networks' (6 ECTS)
	BSc in Mathematics, Computer Science and Digital Sciences	180 ECTS credit points, 3 years	This Bachelor's degree programme provides students with a dual education in mathematics and computer science, enabling them to solve theoretical and applied problems that combine both disciplines. The study programme covers essential notions of modelling and develops the capacity for

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Institution	Degree/Certificate	ECTS credit points/Duration	Description
			abstraction needed for innovation in the fields of new technologies and digital sciences.
Università della Svizzera italiana (USI)	BSc in Informatics	180 ECTS credit points, 3 years	This Bachelor's degree programme offers an innovative, project-based, team-oriented curriculum lasting six semesters. In the first five semesters, students work on group projects. In the sixth semester, they work on an individual final project in which they use all their acquired knowledge to solve an interesting problem. The bachelor programme emphasises theoretical foundations, technology, and soft skills such as communication and teamwork.
Universität Zürich (UZH)	BSc in Informatics	180 ECTS credit points, 3 years	This Bachelor's degree programme equips students with the knowledge and skills needed to shape tomorrow's digital world – whether it be in the area of online trading, health care, finances or media. There is a difference between the IfI and the informatics departments of other universities. This difference is the result of close ties between our faculty and business and economic spheres, which offers tremendous future potential in this period of digitalisation.
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	Bsc in Computer Science	180 ECTS credit points, 3-4 years	This Bachelor's degree programme forms the basis for a successful career as a computer science engineer.

Master programmes

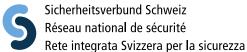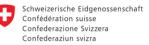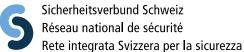| Institution	Degree/Certificate	ECTS credit points/Duration	Description
Berner Fachhochschule (BFH)	MSc in Engineering - profil Computer Science	90 ECTS credit points, 3-7 semesters	Digitalisation is advancing rapidly in all areas of our daily lives. This Master's degree programme provides you with the expertise required to actively contribute to this development.
CYD Campus	CYD Master Thesis Fellowship		CYD Master Thesis Fellowships provide a living allowance and research funds for six months, enabling fellows to complete a Master thesis at the CYD Campus under the supervision of a professor at a higher education institution in Switzerland. CYD Master Thesis applicants may choose a

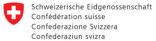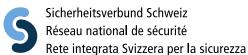|			master thesis topic out of 51 topics offered by the CYD Campus, or they may propose their own thesis topic (in which case, they must select 'other' on the application platform).
École Polytechnique Fédérale de Lausanne (EPFL)/ Eidgenössische Technische Hochschule Zurich (ETHZ)	MSc in Cyber Security (EPFL website) MSc in Cyber Security (ETHZ website)	90 ECTS credit points, 3-6 semesters	This Master's degree programme offers a broad set of courses such as cryptography, formal methods, systems, network and wireless security. It provides both foundational and applied knowledge in this quickly expanding domain by exploiting expertise from both universities.
École Polytechnique Fédérale de Lausanne (EPFL)	MSc in Communication Systems	120 ECTS credit points, 3-6 semesters	This Master's degree programme provides students with a unique education that places emphasis on the interdependence of mathematics, physics, computer science and electrical engineering. Our research focuses on the development and testing of next-generation systems technologies and their integration into the reality of communication systems.
Eidgenössische Technische Hochschule Zurich (ETHZ)	MSc in Computer Science - Master's track in Information Security	90 ECTS points, 3 semesters	This Master's degree programme at ETH Zurich offers a profound and in-depth education in several core areas of computer science. The programme guides each individual student through a variety of useful courses offerings, enabling students to design a training plan that matches both personal interests and prospective career opportunities.
Fachhochschule Nordwestschweiz (FHNW)	MSE in Computer Science		This Master's degree programme allows students to acquire in-depth knowledge and skills in research and development, planning, specification and design of innovative ICT systems and architectures.
Fachhochschule Ostschweiz (FHO)	MSE in Computer Science	90 ECTS points, 3 semesters	Enhance your knowledge: we will train you to become an expert in the software and communication technologies of the future. Practical study: your lecturers work extensively in industrial and research fields – you benefit from up-to-date teaching content. Excellent infrastructure: you will be able to rely on the expertise of the newly created Ostschweizer Fachhochschule (OST) for your research and development work.

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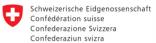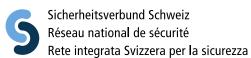|			
Haute École spécialisée de Suisse occidentale (HES-SO)	MSE in Information and Communication Technologies	90 ECTS credit points, 3-5 semesters	Holders of this qualification know how to plan and implement system architectures in heterogeneous IT system landscapes, taking into account interoperability and scalability requirements.
Hochschule Luzern (HSLU)	MSE in Computer Science		This Master's degree programme gives students the unique opportunity to combine research-related and economic fields of interest.
Scuola universitaria professionale della Svizzera italiana (SUPSI)	MSE in Computer Science	90 ECTS points, 3 semesters	This Master's degree programme provides students with specialised knowledge and personal skills as well as a broad basic education in their chosen discipline. During their studies, they will improve their ability to think in abstract terms and to align their actions according to specific applications and solutions. They will also gain extensive methodological know-how, recognise complex interconnections and be able to solve problems on their own.
Universität Basel (UNIBAS)	MSc in Computer Science – Specialisation in 'Distributed Systems'	90 ECTS credit points, 3 semesters	This Master's degree programme includes the mandatory course 'Foundations of Distributed Systems' (8 ECTS) and an advanced course in 'Computer Networks' (4 ECTS)
	MSE in Computer Science/Informatik (Ausserfakultäres Masterstudienfach)	120 ECTS credit points, 4 semesters	This Master's degree programme at the University of Basel offers an application-oriented, modern education in computer science and combines this with a sound basic knowledge of mathematics. It gives its graduates the opportunity to apply their knowledge in a broad professional field in business and government. At the same time, graduates will have the theoretical tools needed to pursue research activities. During their studies, students learn to systematically analyse problems and independently develop solutions using information and communication technologies. The Master's degree programme places emphasis on teamwork and presenting IT solutions.
Université de Berne UNIBE/ Université de Fribourg	Swiss Joint MSc in Computer Science	90 ECTS credit points, 1-5-2 years	Students enrolled in this joint Master's degree programme can create a personalised curriculum from a list of over 60 courses and seminars offered by the universities of Bern, Neuchatel

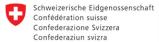|			
UNIFR/Université de Neuchâtel UNINE			and Fribourg (travel costs between universities are reimbursed). They also have the opportunity to specialise in a particular area of interest (Distributed Systems; Advanced Software Engineering; Advanced Information Processing; Logic; Information Systems and Decision Support; Data Science), or to complement their degree with Master's level courses of a minor subject they have already studied.
Université de Genève (UNIGE)	MSc in Digital Systems and Services – Specialisation in Information Security	90 ECTS credit points, 3 semesters	Issued and managed by the University of Geneva's Computer Science Centre. This Master's degree programme builds from the Bachelor's degree programme in Information Systems and Services taught by the University of Geneva's Computer Science Centre. Depending on the student's objectives, several areas of specialisation are offered, including this one on Information Security.
	MSc in Information Science	120 ECTS credit points, 4 semesters	This Master's degree programme includes the mandatory courses 'Advanced Security' (4 ECTS) and 'Security of Information Systems' (6 ECTS)
	MSc in Mathematics, Computer Science and Numerical Sciences	120 ECTS credit points, 4 semesters	This Master's degree programme takes an in-depth look at various areas of mathematics, with a strong emphasis on programming and new computing technologies. This programme allows students to establish tangible connections between the various theories and methodologies inherent to mathematics and computer science. Students can thus become familiar with subjects such as modelling, simulation, information management, database design or multimedia security.
Université de Lausanne (UNIL)	MSc in Forensic Science - Specialisation in Digital Investigation and Identification	120 ECTS credit points, 4 semesters	This Master's degree programme provides students with theoretical, technical and practical training in digital investigation and identification in the information society. Students will receive a cross-sectional exposure and acquire an in-depth understanding of the various fields of forensic science, complemented by advanced technical skills in the area of digitalisation.

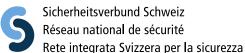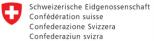|	MSc in Law, Crime and Information Technology Security	120 ECTS credit points, 4 to 6 semesters	This Master's degree programme is offered jointly by the Faculty of Law, Criminal Sciences and Public Administration (School of Law and School of Criminal Sciences) & HEC Lausanne, is intended to offer specialised training through a cross-disciplinary approach that enables participants to gain a clearer understanding of the problems posed by information technologies from a legal, computer and forensic standpoint.
	MSc in Information Systems	90 ECTS credit points, 3 semesters	This Master's degree programme provides advanced skills in new information and communication technologies (ICT) for organisations.
Universität St.Gallen (HSG)	MSc in Computer Science	120 ECTS points, 4 semesters	This Master's degree programme is intended for students who are interested in specialising in one of our core areas – Data Science or Software and Systems Engineering. We also welcome applications from students holding an undergraduate degree in related subjects (e.g. Business Informatics or Electrical Engineering). They will be given the opportunity to demonstrate their strong knowledge of Computer Science during the admission process.
Università della Svizzera italiana (USI)	MSc in Informatics	120 ECTS credit points, 4 semesters	Students enrolled in this Master's degree programme learn about current and emerging technologies in computer science by deepening their theoretical knowledge and sharpening their practical skills. This programme is designed for both holders of a Bachelor's degree who wish to complete their education as well as for professionals seeking to learn about the latest trends.
	MSc in Computational Science	120 ECTS credit points, 4 semesters	This Master's degree programme offers students the opportunity to acquire an in-depth understanding and skills in computational science, which includes numerical simulation, applied mathematics, statistics, and data science. It provides an innovative combination of methodological and applied competences in both computational and data science, which equip students with the knowledge and skills needed to work at the forefront of science and industry.

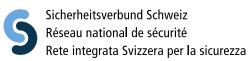| Universität Zürich (UZH)	[MSc in informatics](#)	90 ou 120 ECTS credit points, max 5 years	This Master's degree programme equips students with the knowledge and skills needed to shape tomorrow's digital world – whether it be in the area of online trading, health care, finances or media. There is a difference between the IfI and the informatics departments of other universities. This difference is the result of close ties between our faculty and business and economic spheres, which offers tremendous future potential in this period of digitalisation.
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	[MSE in Computer Science](#)	90 ECTS credit points, 3-4 semesters	This Master's degree programme provides students with in-depth knowledge and skills in research and development, planning, specification and design of innovative ICT systems and architectures. Emphasis is placed on the user experience as well as on necessary security and regulatory aspects. Students learn how to develop and integrate these systems within heterogeneous IT landscapes.

PhD programmes

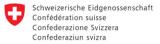| Institution	Degree/Certificate	Description
CYD Campus	[CYD Fellowships - Programme for Cyber-Defence Research](#)	CYD Doctoral Fellowships provide a salary as well as research and conference stipends for four years (with a possible one-year extension), enabling fellows to complete a PhD thesis at the CYD Campus under the supervision of a professor at a higher education institution in Switzerland.
École Polytechnique Fédérale de Lausanne (EPFL)	[PhD in Computer and Communication Sciences](#)	Our PhD programme covers all areas of computer science as well as information and communication theory, from its mathematical foundations to systems, platforms, and interdisciplinary applications. With roughly sixty affiliated faculty members, it is one of the largest and most competitive PhD programmes on campus.
Eidgenössische Technische Hochschule Zürich (ETHZ)	[PhD in Computer Science](#) (Information & System Security research)	With 4,100 PhD students in the total 21,000 student body, ETH Zurich is one of the most research-intensive universities in Europe. PhD students make a significant, fundamental contribution to that research work, independently working on research projects under the supervision of a professor.
Université de Berne (UNIBE)	[PhD in Computer Science](#)	The aim of this PhD programme is to develop and disseminate new knowledge in computer science. Generally speaking, doctoral work takes three to four years complete

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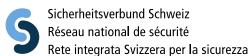|		
		and leads to a PhD in computer science. PhD work is conducted in close cooperation with a supervisor from the Institute of Computer Science. Possible research topics are usually in the areas covered by the institute's research groups.
Université de Fribourg (UNIFR)	PhD in Computer Science	The University of Fribourg is proud to offer this PhD programme, which offers students the opportunity to develop their ability to handle scientific problems both for academia and industry. Computer Science has a transformative impact on many facets of our society. PhD students may choose from a wide range of different computer science-related research topics at the University of Fribourg.
Université de Genève (UNIGE)	PhD in Computer Science	This PhD programme is based on an individual research project under the supervision of a thesis director. Candidates for a PhD from UNIGE must hold a Master's degree or equivalent qualification.
	PhD in Information Systems and Service Science	This cutting-edge PhD programme allows PhD students to develop fundamental models and theories for these disciplines and create, design and test information systems and digital services of tomorrow.
Université de Lausanne (UNIL)	PhD in Information Systems	This PhD programme helps PhD students to develop their ability to complete an independent research study and contribute to the body of knowledge in research fields that are closely related to new technologies and digital innovation. Successful applicants must hold an MSc degree in Information Systems, Computer Science, or an equivalent degree (with a minor in Information Systems / min. 30 ECTS). This PhD programme opens the way for an academic career as well as employment opportunities in consulting, large corporations or public institutions. The PhD is also an excellent starting point for entrepreneurial activities.
Université de Neuchâtel (UNINE)	PhD in Computer Science	This PhD programme is offered by the University of Neuchatel's Institute of Information Technology (IINU).
Università della Svizzera italiana (USI)	PhD in Informatics	This PhD programme at the USI Faculty of Informatics helps prepare new professionals interested in academic or industrial research careers. A successful PhD student will gain broad expertise and understanding of the general field of informatics as well as an in-depth specialisation in an area of interest. Working with one or more faculty members, PhD students contribute original, useful, and scientifically valid ideas in their chosen area of research. In addition, students will develop the professional skills that will be needed throughout their career.

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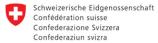Cyber-Defence Campus

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| | PhD in Computational Science | The Faculty of Informatics also hosts the Swiss Graduate Programme FoMICS 'Foundations of Mathematics and Informatics in Computational Science'. FoMICS is an education network of Swiss universities to train PhD students in Computational Science. It is based on the two key components, mathematical modelling and high-level engineering of scientific software. FoMICS offers a curriculum covering the foundations of mathematical models and algorithms as well as computing and simulation skills. The aim is to enable participating PhD students to develop tailored mathematical models and efficient software exploiting the capabilities of recent hardware environments, from local, specialised architectures to Swiss-wide large-scale HPC systems. |
| Universität Zürich (UZH) | PhD in Informatics | This PhD programme at the University of Zurich's Department of Informatics focuses on five fields: Information Systems, Software Systems, People-Oriented Computing, Computing and Economics and Data Science. Our programme enables talented students to embark on an academic career or developing high potential for work in industry. |

NON-FORMAL CONTINUING EDUCATION AND TRAINING SECTOR

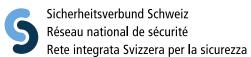**Certificate of Advanced Studies programmes**

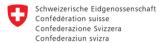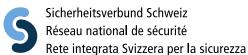| Institution	Degree/Certificate	ECTS credit points/Duration	Description
Berner Fachhochschule (BFH)	CAS in Digital Forensics & Cyber Investigation Fundamentals	12 ECTS credit points, 4 one-week modules taught on campus	This CAS programme covers digital forensics, cyber investigations, cyber crime and digital forensic evidence gathering.
	CAS in Security Incident Management	12 ECTS credit points	Cyber attacks are on the rise and are becoming more sophisticated every day. Companies need to be able to handle security-related incidents quickly and in a targeted way. In this CAS programme, students learn how to take professional, targeted and methodical action against attacks.
	CAS in Networking and Security	12 ECTS credit points	Functionality and security are key requirements for networks. This CAS programme is geared towards people working in the

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			design, construction and operation of internet-based communication networks.
	CAS in IT Security Management	12 ECTS credit points	Data needing to be accessible at all times and from anywhere in the world places enormous demands on the management and engineering of security, privacy, access control and data protection. In this CAS programme, students acquire the specialist skills they need to actively participate in an integral security organisation, and learn to define IT security processes in order to use them in ongoing IT security activities.
Eidgenössische Technische Hochschule Zurich (ETHZ)	CAS in Cyber Security	10 ECTS credit points, 1 semester	This CAS programme focuses on the technical foundations of information security from a computer science standpoint and is complemented with more policy-based aspects of cyber security.
Fachhochschule Nordwestschweiz (FHNW)	CAS in Cybersecurity and Information Risk Management	15 ECTS credit points, 2 months, 15 classroom days	Security first! Cyber attacks, information security and risk management are central topics for managers everywhere. For businesses today, protecting digital assets (e.g. company and personal data and other information) is critical. This is why cyber security strategies, security awareness campaigns and comprehensive information security management are crucial tools for IT managers.
Fachhochschule Ostschweiz (FHO)	CAS in Cyber Security	15 ECTS credit points, 9 months	This new part-time CAS programme offers experienced IT specialists the opportunity to specialise in cyber security alongside their employment. Training is practice-oriented, with a focus on technology.
Haute École Arc (HE-Arc)	CAS en investigation numérique – Criminalité informatique (CAS IN-CI)	16 ECTS credit points, 6 months	Like the other four specialised CAS programmes in Digital Investigation, this CAS programme provides graduates with the specific knowledge they need to carry out digital investigations. It is intended for people seeking to improve their investigative skills in the area of computer crime.
	CAS en investigation numérique – Stations de travail (CAS IN-ST)	16 ECTS credit points, 6 months	Like the other four specialised CAS programmes in Digital Investigation, this CAS programme provides graduates with the specific knowledge they need to carry out digital investigations. Prospective students have a sound general

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HKA

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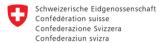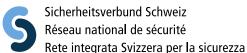|			knowledge of IT; graduates are able to analyse data storage devices for law enforcement agencies or large companies.
	[CAS en investigation numérique – Matériels nomades (CAS IN-MN)](#)	16 ECTS credit points, 6 months	Like the other four specialised CAS programmes in Digital Investigation, this CAS programme provides graduates with the specific knowledge they need to carry out digital investigations. Prospective students have a sound general knowledge of IT; graduates are able to analyse mobile devices for law enforcement agencies or large companies.
	[CAS en investigation numérique – Réparation et dessoudage (CAS IN-RD)](#)	16 ECTS credit points, 6 months	Like the other four specialised CAS programmes in Digital Investigation, this CAS programme provides graduates with the specific knowledge they need to carry out digital investigations. It is intended for those seeking to improve their skills in the repair of hard drives and desoldering of computer components.
	[CAS en Investigation numérique – Réseaux et Live Forensic (CAS IN-RLF)](#)	16 ECTS credit points, 6 months	Like the other four specialised CAS programmes in Digital Investigation, this CAS programme provides graduates with the specific knowledge they need to carry out digital investigations. It is intended for those seeking to improve their skills in the investigation of networks and machines in operation.
Haute école de gestion de Genève (HEG-GE)	[CAS Architecture de la sécurité des systèmes d'information (CAS ASSI)](#)	15 ECTS credit points, 6 months	This CAS programme provides the necessary technical skills in information security taking into account such things as secure infrastructures, mobile security and human factors.
HES-SO Valais-Wallis	[CAS en cyber sécurité](#)	15 ECTS credit points, 6 months	This CAS programme was introduced in 2019. What makes this postgraduate CAS programme unique is that it combines legal aspects and corporate governance with strategic and technical aspects. It also places emphasis on practice; teaching staff have backgrounds in industry and academia.
Hochschule Luzern (HSLU)	[CAS in Cyber Investigation & Digital Forensics](#)	15 ECTS credit points, 5 months	Skills required to carry out cyber investigations and digital forensics. This CAS programme will enable participants to identify, analyse and interpret digital traces in complex ICT

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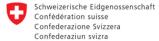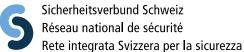Réseau national de sécurité
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			environments (cyberspace) in order to derive legally admissible, case-relevant information.
	CAS in Cyber Security Defence & Response	15 ECTS credit points, 5 months	Acquire expert knowledge in the secure operation of modern systems. This CAS programme covers the basics of cyber security and offers students the opportunity to apply what they have learned in a state-of-the-art 'online cyber security lab', and to obtain a Cisco certificate.
	CAS in Information Security - Advanced	15 ECTS credit points, 4 months	An advanced course in information security with a focus on technology. This advanced CAS programme builds on the knowledge and skills acquired in the CAS programme in Information Security – Technology, focusing primarily on technology while also addressing management and legal aspects.
	CAS in Information Security - Management	15 ECTS credit points, 6 months	Information security with a focus on management. In this CAS programme, students learn the basics of information security. This course focuses primarily on management aspects while also addressing technological and legal aspects.
	CAS in Information Security - Technology	15 ECTS credit points, 4 months	Information security with a focus on technology. In this CAS programme, students learn the basics of information security. This course focuses primarily on technical aspects while also addressing management and legal aspects.
	CAS Data Privacy Officer	15 ECTS credit points, 5 months	Expertise required to work as company data privacy officers or data protection consultants. This CAS programme imparts the necessary expertise in the area of company data protection. Course participants learn about the latest developments relating to the current revision of the Swiss Data Protection Act as well as relevant aspects of the EU General Data Protection Regulation (GDPR) 2016/679.
Université de Genève (UNIGE)	CAS1-InfoSec Protection de l'information	15 ECTS credit points, 1 semester	This CAS programme provides course participants with an understanding of the fundamental concepts of information security, how to perform a risk analysis, how to ensure business continuity and how to manage a major crisis. The technical aspects of computer network security are studied for

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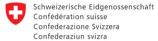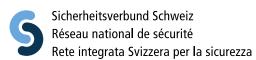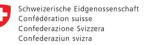|			
			the purpose of creating adequate information security. Finally, new technological trends and corresponding security solutions are also covered to keep participants abreast of the latest developments.
	CAS2-InfoSec Gouvernance de la sécurité de l'information	15 ECTS credit points, 1 semester	This CAS programme provides course participants with an understanding of the fundamental concepts of information security, how to perform a risk analysis, how to ensure business continuity and how to manage a major crisis. The technical aspects of computer network security are studied for the purpose of creating adequate information security. Finally, new technological trends and corresponding security solutions are also covered to keep participants abreast of the latest developments.
	CAS3-InfoSec Gestion de la sécurité dans sa globalité	15 ECTS credit points, 1 semester	This CAS programme provides course participants with an understanding of the fundamental concepts of information security, how to perform a risk analysis, how to ensure business continuity and how to manage a major crisis. The technical aspects of computer network security are studied for the purpose of creating adequate information security. Finally, new technological trends and corresponding security solutions are also covered to keep participants abreast of the latest developments.
	CAS Blockchain – Développement d'applications décentralisées avec blockchain et Distributed Ledger Technologies (DLT)	12 ECTS credit points	Issued and managed by the University of Geneva's Computer Science Centre. The four modules can be taken separately. The development of decentralised applications based on distributed ledger technologies (DLT) is a field that lacks qualified personnel worldwide. This is in particularly true in Geneva, where there is a political will to develop the economy around fintechs, blockchains and other initial coin offerings (ICOs) or security token offerings (STOs). Switzerland is home to several blockchain development platforms, including Ethereum, one of the world's major platforms, and Libra, the blockchain/cryptocurrency launched by Facebook, whose

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			association is based in Geneva. These cryptocurrencies will be covered in this training course.
	CAS GIO – Gouvernance de l'information en organisation - Protection des données, Conformité et Sécurité de l'information	15 ECTS credit points	Taught and run by the University of Geneva's Computer Science Centre, in partnership with the Lucerne School of Computer Science and Information Technology and the Lucerne University of Applied Sciences and Arts (HSLU). This CAS programme is a first step towards achieving organisational compliance. It provides an understanding of legal compliance obligations with regard to the protection of personal data as well as expertise in the technical aspects surrounding the underlying digital technologies and their impact on the protection of personal data.
Université de Lausanne UNIL/ École Polytechnique Fédérale de Lausanne EPFL	CAS Investigation numérique et analyse de données	15 ECTS credit points	The full spectrum of crime and criminal activity is evolving and often include a digital component. How can investigative methods be adapted and on what basis? Whether in the public or private sector, or in non-governmental organisations, digital investigation and data analysis are at the heart of decision-making processes. In this context, what principles and methods apply? How does on obtain, preserve, analyse, evaluate and interpret digital traces in the context of solving operational problems and implementing strategic intelligence? In order to face these challenges, participants in this training course will develop advanced skills and knowledge that can be applied to many different situations and which are based on a forensic and practical approach.
Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)	CAS in Cybersecurity	12 ECTS credit points, 10 days and 8 half-days	This CAS programme provides students with technical and management skills. In the management part, CAS students learn strategies on how cyber security technology can be used in a cost-effective manner to protect the company and detect attacks at an early stage. The CAS programme focuses on organisational design, training and the role of employees, as well as knowledge transfer inside and outside the company. In the technical part, CAS students gain a basic understanding of

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			terminology and the latest knowledge of forms of attack and protective concepts.

Diploma of Advanced Studies programmes

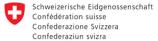| Institution	Degree/Certificate	ECTS credit points/Duration	Description
Berner Fachhochschule (BFH)	DAS in Cyber Security	36 ECTS credit points, 3 semesters	Cyber security specialists ensure the performance and reliability of their company's communication infrastructure and are responsible for security, privacy and access management. They deal with all measures needed to ensure the proactive and reactive security of these systems.
Eidgenössische Technische Hochschule Zürich (ETHZ)	DAS in Cyber Security	35 ECTS credit points	This DAS programme focuses on cyber and information security from a computer science standpoint
Haute école de gestion de Genève (HEG-GE)	DAS en gouvernance de la sécurité des systèmes d'information (DAS GSSI)	33 ECTS credit points, 12 months	This DAS programme provides students with the necessary information security-related in the area of governance, methodology, technology, strategy, management, risk analysis and organisation.
Université de Genève (UNIGE)	DAS-InfoSec Sécurité de l'Information	30 ECTS credit points, 2 semesters	Taught and run by the University of Geneva's Computer Science Centre. The skills developed in this DAS programme are similar to those of a chief information security officer (CISO). It integrates all the modules of the CAS-InfoSec with an additional part that deals with organisational aspects of the company such as governance and business processes, specific legal aspects relating to data protection, case studies of information system audits and an analysis of external seminars dealing with security in the French-speaking region of Switzerland.

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Master of Advanced Studies programmes

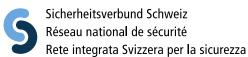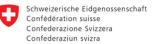| Institution	Degree/Certificate	ECTS credit points/Duration	Description
Berner Fachhochschule (BFH)	MAS in Digital Forensics & Cyber Investigation	60 ECTS credit points, 5 semesters	Today, cyber crime is pervasive, affecting industry, public institutions and infrastructure alike. Forensic experts and cyber crime investigators collect and analyse digital evidence from a wide variety of complex sources. To do their work, they must have a clear understanding of attack scenarios, actors, investigation methods and techniques, as well as of any relevant regulations. This MAS programme provides students with all of the knowledge, methods and competences they need.
	MAS in Cybersecurity	60 ECTS credit points, 5 semesters	Cyber security specialists ensure the performance and reliability of their company's communication infrastructure and are responsible for security, privacy and access management. They handle all measures needed to ensure the proactive and reactive security of these systems.
Haute école de gestion de Genève (HEG-GE)	MAS en management de la sécurité des systèmes d'information (MAS MSSI)	60 ECTS credit points, 18 months	This MAS programme provides students with the necessary information security skills in the area of governance, methodology, technology, strategy, management, risk analysis, organisation, human factors as well as in the more technical aspects of secure IT infrastructures.
Haute École Arc (HE-Arc)	MAS en lutte contre la criminalité	60 ECTS credit points, 2 years	This MAS programme is unique in French-speaking Switzerland. It is interdisciplinary, based on ethical principles and practice-oriented. Graduates of this MAS programme are specialists in the prevention and suppression of economic crime. Graduates have a sound knowledge of business, law, information technology and forensic science in the areas of economic crime, cyber crime and organised crime. Using interdisciplinary and analytical thinking skills, they are able to methodically solve complex cases.

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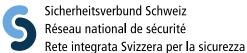| Hochschule Luzern (HSLU)	MAS in Information & Cyber Security	60 ECTS credit points, 24 months	Acquire expert knowledge in information and cyber security. This MAS programme provides students with in-depth knowledge in the three areas of technology, management and law. Graduates are experts in information and cyber security and are able to make qualified decisions.
	MAS in Information Security & Privacy	60 ECTS credit points, 24 months	Acquire expert knowledge in information security and privacy. This MAS programme provides students with in-depth knowledge in the three areas of technology, management and law. Graduates are experts in information security and data protection and are able to contribute to and make qualified decisions.
Université de Genève (UNIGE)	MAS-InfoSec Sécurité de l'information	60 ECTS credit points, 4 semesters	Taught and run by the University of Geneva's Computer Science Centre. The skills developed in this MAS programme are similar to those of a chief security officer (CSO). It integrates all the modules covered in the DAS-InfoSec programme with an additional part dealing with topics such as contractual clauses, cyber crime and economic intelligence, communication and the principles that apply when implementing a security policy.

Workshops

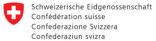| Institution	Degree/Certificate	ECTS credit points/Duration	Description
École Polytechnique Fédérale de Lausanne EPFL (C4DT)	Course catalogue		The C4DT Academy offers tailored training led by experts in digital trust technologies. It improves digital trust skills and awareness. Out team of instructors handles all requests to develop and teach tailor-made training sessions.
Geneva Centre for Security Policy	Meeting the Cyber Security Challenge - A Virtual Learning Journey 2021	3 days	Cyber security today is not one single problem, but a collection of challenges, none of which can be resolved in isolation. Our highly interactive flagship cyber security course can help organisations, institutions and governments to address and minimise the impact of these modern challenges. By examining social and political responses to cyber security

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			challenges and becoming familiar with technical solutions, participants in this course become equipped with the tools needed to face the cyber security challenges.
Haute école de gestion de Genève HEG-GE (CCSIE)	Cyber Security in IT Systems and Networks	1 day (for generalists) or 5 days (for specialists)	The Competence Centre for Business Information Security (CCSIE) at the Geneva School of Business offers short one-day workshop (for generalists) as well as longer five-day workshop (for specialists) in the area of cyber security in computer systems and networks.
Hochschule Luzern (HSLU)	Fachkurs Cybercrime	2 days	This specialised workshop provides an overview of cybercrime and focuses in particular on threats posed by hacking, cracking and malware. In the theory portion of the workshop, participants gain insight into the variety of crimes currently taking place in cyberspace. The workshop also includes laboratory work to learn various ways of dealing with hacking, cracking and malware.
	Fachkurs Informations- und Cyber-Sicherheit in kleinen Unternehmen	1 day	Companies want to improve information security and protect themselves from the dangers from cyberspace. This workshop covers the basics for this from the three relevant dimensions of technology, management and law.
Institut Suisse d'Enseignement de l'Informatique de Gestion (ISEIG)	Cybercriminalité, les bons réflexes Cyberattaque = Intervention humaine	½ day	This half-day workshop raises awareness and presents good practices and rules on how to avoid the inconvenience and costs of an attack, scam or loss of data.
	DPO - Data Protection Officer	5 days	This five-day workshop provides the knowledge and skills needed to work as a data protection officer (DPO). It is based on the requirements of the GDPR and Federal Data Protection Act. Participants will also learn how use HERMES 5 methodology to manage projects relating to the implementation of management systems, data protection and continuity plans. In addition, the workshop will cover the federal government's standards for IT resilience and how to implement these standards using suitable IT tools.

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	Governance of Information Security Systems, ISO/IEC 27001 Certification	3 days	In this workshop, participants will learn how to implement an IS management system that complies with the ISO 27001:2016 standard and associated guidelines. The workshop covers the standards and how to use them in practice, with practical examples so that each participant will be able to reproduce them at home, while knowing how to organise and scale their project. The workshop also prepares students for internationally recognised certification 'Information Security Foundation based on ISO/IEC 27001', which provides proof that the course material has been learnt and assimilated.
Université de Fribourg UNIFR	'Cyber Security' module	2 days	This workshop is organised by the International Institute for Management in Technology
	Mandatory 'Sécurité et confidentialité' module		Mandatory module covered in the certification course for those called upon to teach computer science as a compulsory subject at baccalaureate schools. This certification course is taught in cooperation with several universities, universities of teacher education and universities of applied sciences under the direction of the University of Fribourg. The certification course is broken down into various modules and allows baccalaureate school teachers in secondary schools to complete their training (107 ECTS) alongside their employment.

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PROFESSIONAL EDUCATION SECTOR

Federal Diploma of Higher Education

Degree/Certificate	ECTS credit points/Duration	Description
Cyber Security Specialist, Federal Diploma of Higher Education	2 semesters	The preparatory course for the federal examination leading to issuance of this qualification takes place in private training institutions. This course generally lasts between 2 and 3 semesters. The Swiss Armed Forces also provide training in cyber security, which may be included as part of recruit training. Those who complete their cyber security training may take the federal professional examination to certify themselves as a Cyber Security Specialist, Federal Diploma of Higher Education.

Advanced Federal Diploma of Higher Education

Degree/Certificate	ECTS credit points/Duration	Description
ICT Security Expert, Advanced Federal Diploma of Higher Education	3-4 semesters	The preparatory course for this advanced federal professional examination leading to issuance of this qualification takes place in private training institutions.