



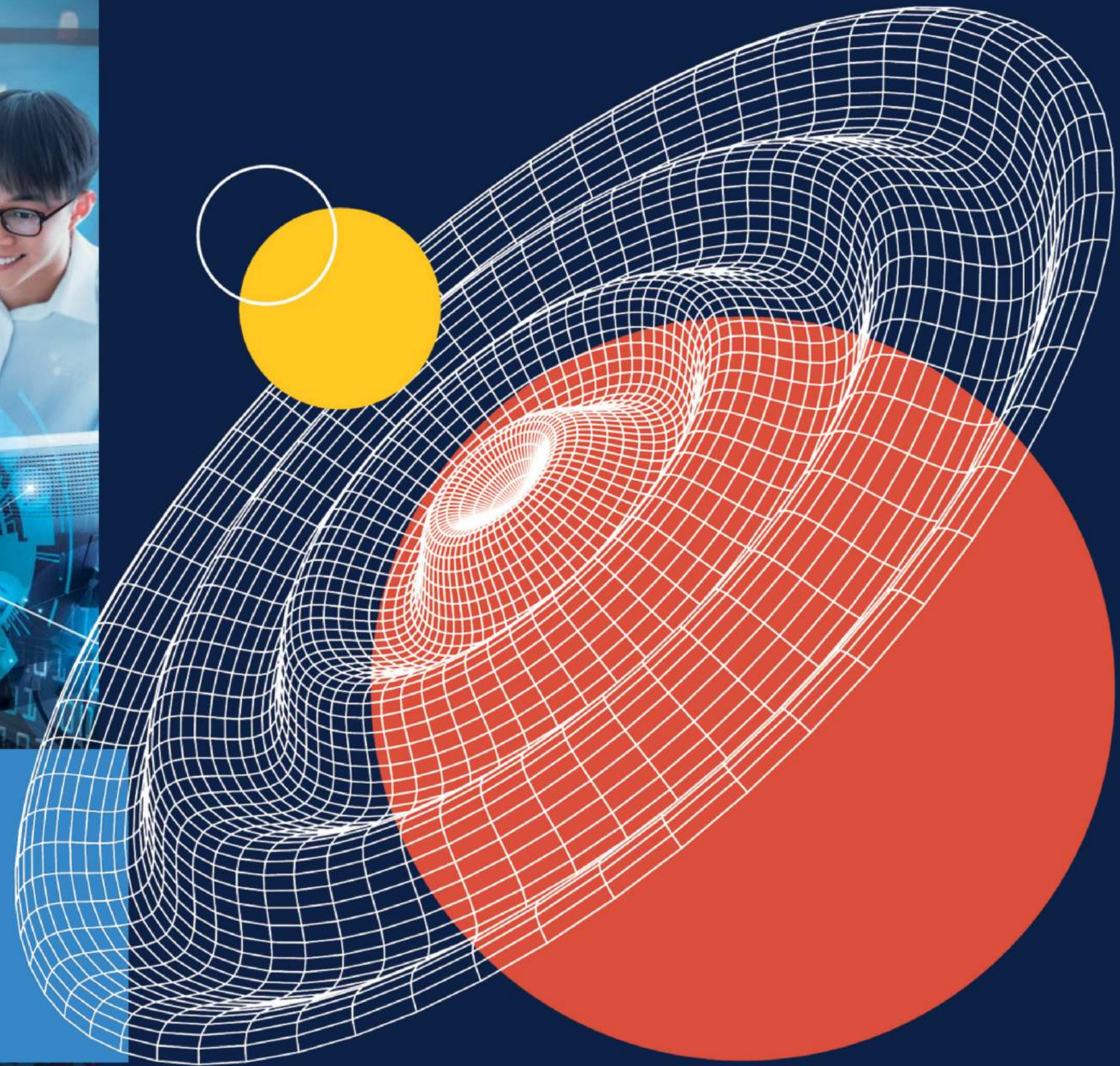
Study in Switzerland



# Educating the NEXT generation of digital leaders



Our graduate  
programs







# MSc in Computer Science, Software Engineering, and Leadership (CSSEL)

## Facts and figures

- Academic degree  
Master of Science in Computer Science, Software Engineering and Leadership (CSSEL)
- Language of instruction  
English
- Application & Admission dates  
**15th of June for all students - Rolling admission\***
- Program start date  
Mid September (classes)
- Teaching mode  
Hybrid mode (ideal if your visa is not ready on time)
- Study duration  
Classic program (120 ECTS):  
4 semesters; Fast-track and part-time options available
- Tuition  
10,000 CHF per year for EU and EFTA students \*\*  
20,000 CHF per year for non-EFTA and non-EU nationals \*\*
- Location  
Schaffhausen, Switzerland
- Scholarships  
Full scholarships and tuition waivers for students with excellent grades are available
- Teaching benefits  
Supported by a unique team of world-class scientists, educators, and leaders

## What we offer

- Deep interdisciplinary technical expertise
- Entrepreneurial mindset and a can-do mentality
- Strong connections to major target industries
- High-tech, high-touch study environments

\* Deadline could be extended due to individual circumstances and availability

\*\*Spring forward - 10% tuition fee reduction by 30th of April

## Drive innovation in a digitalized future

The complex, ambitious, and innovative software systems developed by successful technology companies require a particular kind of leader, possessing both in-depth technical knowledge and excellent leadership abilities. Some traditional master's programs train software developers, and others train classical managers, but they often fail to deliver the digital-technology-savvy leaders that companies need for positions such as Product Manager, Chief Information Officer, Chief Security Officer, Chief Technology Officer, Chief Program Officer, Chief Security Officer, Chief Development Officer, Chief Product Officer, and others requiring competence on both sides.

The Master of Science in Computer Science, Software Engineering and Leadership (CSSEL) at Constructor Institute Schaffhausen addresses this urgent need. The research-oriented master's program includes a wide range of courses and projects covering a broad spectrum of computer science and software engineering topics as well as essential management and leadership skills. To prepare students for the role of technology leaders in research and industry, the CSSEL master's program provides a strong software engineering training covering both development and management, as well as core technical courses in three areas that lie at the heart of modern IT systems:

- Software engineering
- Cybersecurity
- Artificial intelligence

Courses are taught by experts in the field, including permanent Constructor faculty and lecturers from companies.

By completing the master's program, students acquire the core expertise of digital leaders, with a strong technological backbone, and essential management and leadership skills, making them ready for active leadership in the digital technology field.

Constructor University's multi-country setup prepares them to play a key role in today's global and multiethnic societies. While many students join the industry in high-profile roles, the CSSEL program is also an excellent preparation for Ph.D. research in software engineering, cybersecurity, artificial intelligence and other advanced topics.

## Program structure

➤ MSc in Computer Science, Software Engineering and Leadership (CSSEL)

		Master Thesis / Seminar (m, 30 CP)						
➤ Year 2		Core (me, 5.0 CP)	Core (me, 5.0 CP)	Core / Research Project* (me, 5.0 CP)	Capstone Project III (me, 5.0 CP)	Transformational Change Management (m, 5.0 CP)	Customer-centric Mindset and Agile Delivery Management (m, 2.5 CP)	Agile Leadership & Strategic Management (m, 2.5 CP)
		Architectural Strategy (m, 5.0 CP)	Core (me, 5.0 CP)	Core (me, 5.0 CP)	Capstone Project II (me, 5.0 CP)	Product Innovation and Marketing (m, 5.0 CP)	Organizational Behavior (m, 2.5 CP)	Academic Writing Skills / Intercultural Training (m, 2.5 CP)
➤ Year 1		Software Construction, Software Architecture and Software Engineering (m, 5.0 CP)	Quality Engineering (me, 5.0 CP)	Core (me, 5.0 CP)	Capstone Project I (me, 5.0 CP)	Agile Product Development & Design (m, 5.0 CP)	Entrepreneurship & Intrapreneurship (m, 2.5 CP)	Communication & Presentation Skills for Executives (m, 2.5 CP)
		Core Technical Content			Management		Leadership / Academic Skills	

m = mandatory, me = mandatory elective



## Applying knowledge with the Capstone project

The Capstone project allows students to apply the knowledge and expertise in technical, management and leadership skills gained throughout the master's program in a "real-world" project that runs over the course of three semesters. The course teaches students how to effectively design reliable systems that meet the needs of producers and customers, developing solutions to agreed-upon problems with industry partners and laboratories that act as clients. Working closely with instructors and assistants, students are mentored and work in a modern environment supported by open-source IDEs and engineering tools.



Prof. Manuel Oriol



Studying in Switzerland offers a unique and enriching experience that combines natural beauty, academic excellence, and a high quality of life.



Ananga Thapaliya, Nepal



Flora Teklit, Ethiopia



Yuri Gritsuk, Belarus



"It's a flexible and demanding program that prepares you for the real world, equipping you with both hard and soft skills. Whether you come from a technical or business background there is something for everyone – programming, entrepreneurial, and business courses. It gives you so many opportunities by exposing you to new people and a new culture. If you are proactive, you will make connections with a lot of companies, and be able to handle yourself anywhere."



"The way the program is designed is quite innovative. It's a mixture of technology and leadership courses, where you get good exposure to emerging technologies, and is a perfect fit for the current market. It's located in the most beautiful city, Schaffhausen, with supportive faculty members and diverse classmates. You will not regret joining this program!"



"Switzerland is a great country to be in because of its high standard of living, the tolerance of people and the number of opportunities available."

Check our video here



## Career opportunities

Constructor Institute's master of science programs allow you to graduate with the skills needed to drive innovation in industry, academia, or through your own startup. Through interdisciplinary learning and the development of strong skills in various functional areas, the knowledge gained throughout the master's program will not only guide you to the career of your choice but will allow you to stand out as an exceptional candidate.

With scientifically up-to-date course content, the skills and knowledge required by the industry needs of today and tomorrow are expertly met. The students profit from unique opportunities such as employment through our network, research project participation, and opportunities to access the EU and Swiss job markets.

### Future leadership jobs

- **Chief Architect (CA):** A crucial and active horizontal role to drive the technology delivery roadmap across the organization.
- **Chief Product Officer (CPO):** A strategic leader, visionary, and team supervisor of new-generation product management in which computer science, business, and innovation are combined.
- **Chief Program Officer (CPO):** A new leader who focuses on program value flow and delivery, stakeholder communication, cadence and planning, cross-team collaboration, and continuous improvement.
- **Chief Development Officer (CDO):** A strategic leader who shapes an enabling engineering environment – people, structure, agile processes, and tools.
- **Chief Security Officer (CSO):** A transformational leader who takes a "bodyguard" approach rather than a "gate-keeper" one.



## Take concrete steps toward the career of your dreams

Use the writing of a master's thesis to further enhance your career prospects or diversify into a different functional area.

- Research project
- Industry project
- Startup design

### Industry partners

At Constructor Institute, we believe that to prepare the next generation of leaders in science, students must learn not only from renowned scientists but also from business leaders. Traditional technical education does not fully prepare students for a technical career. Our network of industry partners has experienced this firsthand. That is why we provide access points to several large software and IT organizations headquartered in Schaffhausen, allowing a one-of-a-kind relationship with industries.

- Acronis: Leader in cyber protection.
- Plesk: Leading WebOps hosting platform.
- Acumatica: Leading innovator in cloud ERP.
- cPanel: Industry-leading hosting platform.
- Parallels: Leader in cross-platform solutions.
- Runa Capital: Global venture capital firm.



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INSTITUTE



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**Knowledge  
through science**