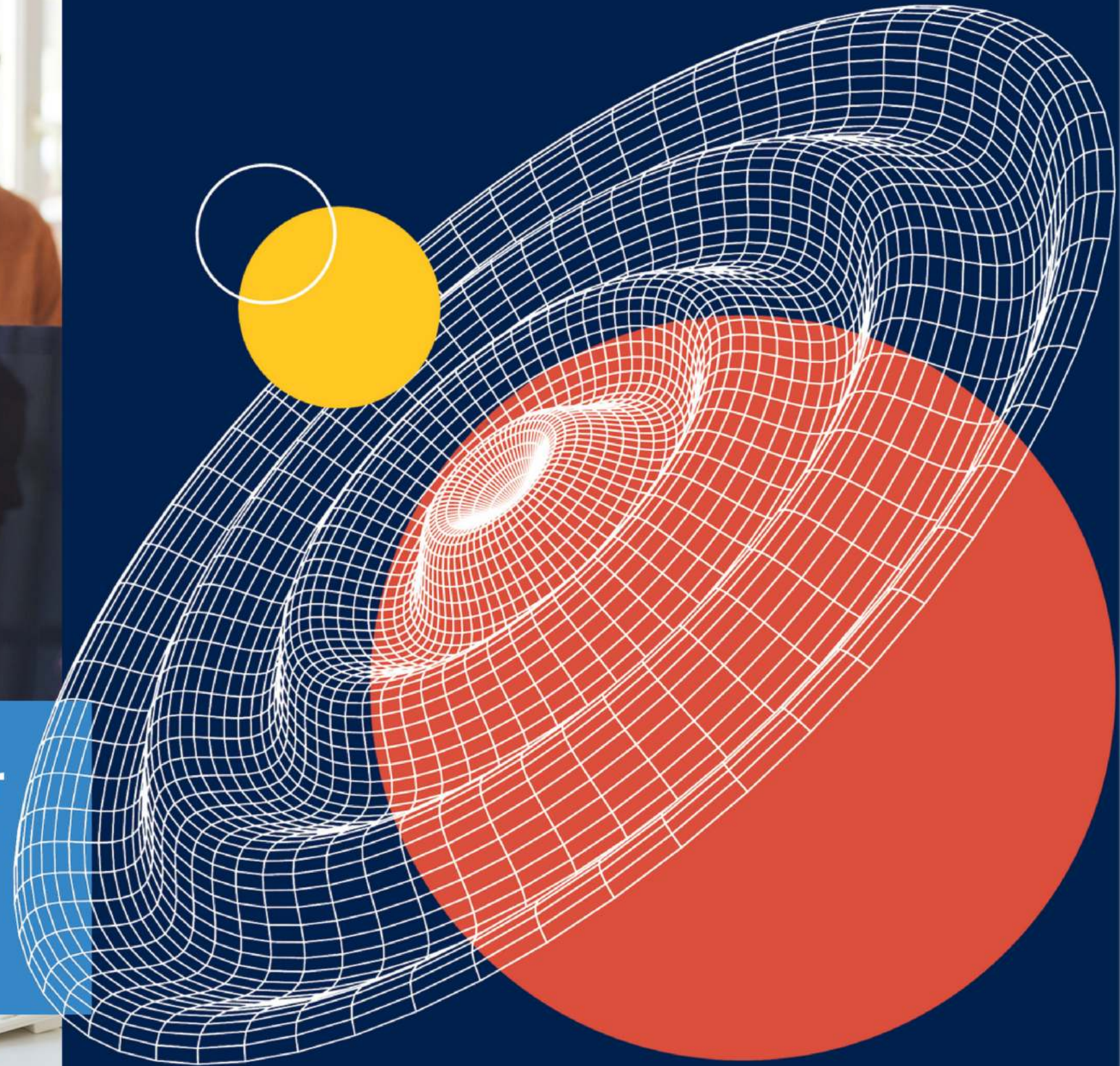




Study in Switzerland



Constructor Institute: Pre-Master Program in Foundations of Information Technology (FIT)

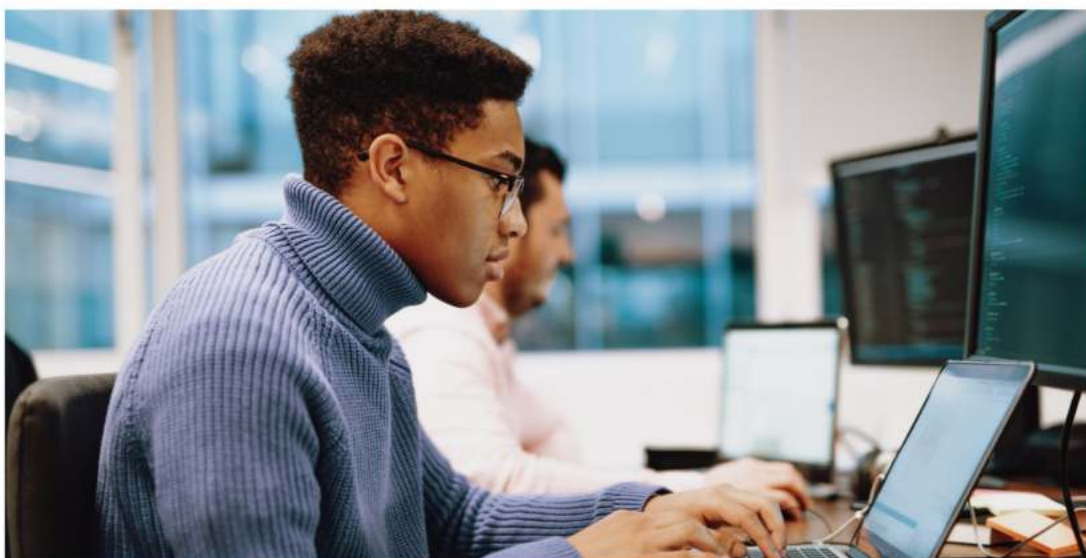




Introduction to the program

About FIT Pre-Master program

Are you a programming enthusiast with some gaps in your computer science and software engineering background? Constructor Institute's FIT Pre-Master program is your pathway to bridging these gaps in both practical and theoretical concepts giving you the essential elements to become a more effective IT professional, particularly if you aspire to pursue an MSc in computer science, software engineering or Quantum technologies.



Program features

- **Starting date:** first week of April
- **Deadline:** rolling admission
- **Duration:** 4 months (April-July)
- **Tuition fee:** CHF 3,000
- **Credits:** 24 ECTS (Approximately 720 hours)
- **Focus:** Theoretical and practical foundations
- **Form of education:** Online
- **Outcome:** This certificate grants automatic admission into the [CSSEL](#) or [QSECS](#) master of science programs at Constructor Institute upon completion with a minimum overall grade of 5* or higher.

**Grades for the pre-master program follow the Swiss grading system, with 1 (minimum) and 6 (maximum), while 4 is the minimum passing grade.*



Who should apply?

- Professionals with basic knowledge in related study fields seeking advanced preparation in Computer Science or Quantum Technologies.
- Individuals with scientific degrees (math, physics, engineering).
- Solid understanding of mathematics.
- Bachelor students aspiring to pursue a Master degree in Information-Technology-related disciplines but without a strong academic background in computer science, and considering the CSSEL or QSECS Master programs.

Program structure

The schedule is divided into two blocks:

1. Block A: Foundations
 - 4 Courses (3 ECTS** each)
2. Block B: Applications
 - 4 Courses (3 ECTS each)

***The total program comprises 24 ECTS credits.*



Refer a friend, save 10%



Refer your friends and colleagues to join our prestigious Pre-Master program, and both you and your referred candidates will enjoy a special 10% reduction in tuition fees! It's a win-win situation – you not only enhance your educational experience but also create a network of like-minded individuals on the same exciting academic adventure.

Here's how it works:

1. Refer a friend or colleague to our Pre-Master program.
2. When they apply, ensure they mention your name as the referrer.
3. Both you and your friend will enjoy a 10% reduction in tuition fees!

Don't miss out on this chance to elevate your educational journey and help your peers do the same. Share the gift of education and enjoy the rewards together!



Curriculum

Block A (April - May)

Logic & discrete math

Theory of computing

Math for AI and ML

Object-oriented programming

Block B (June - July)

Operating systems & concurrency

Information systems

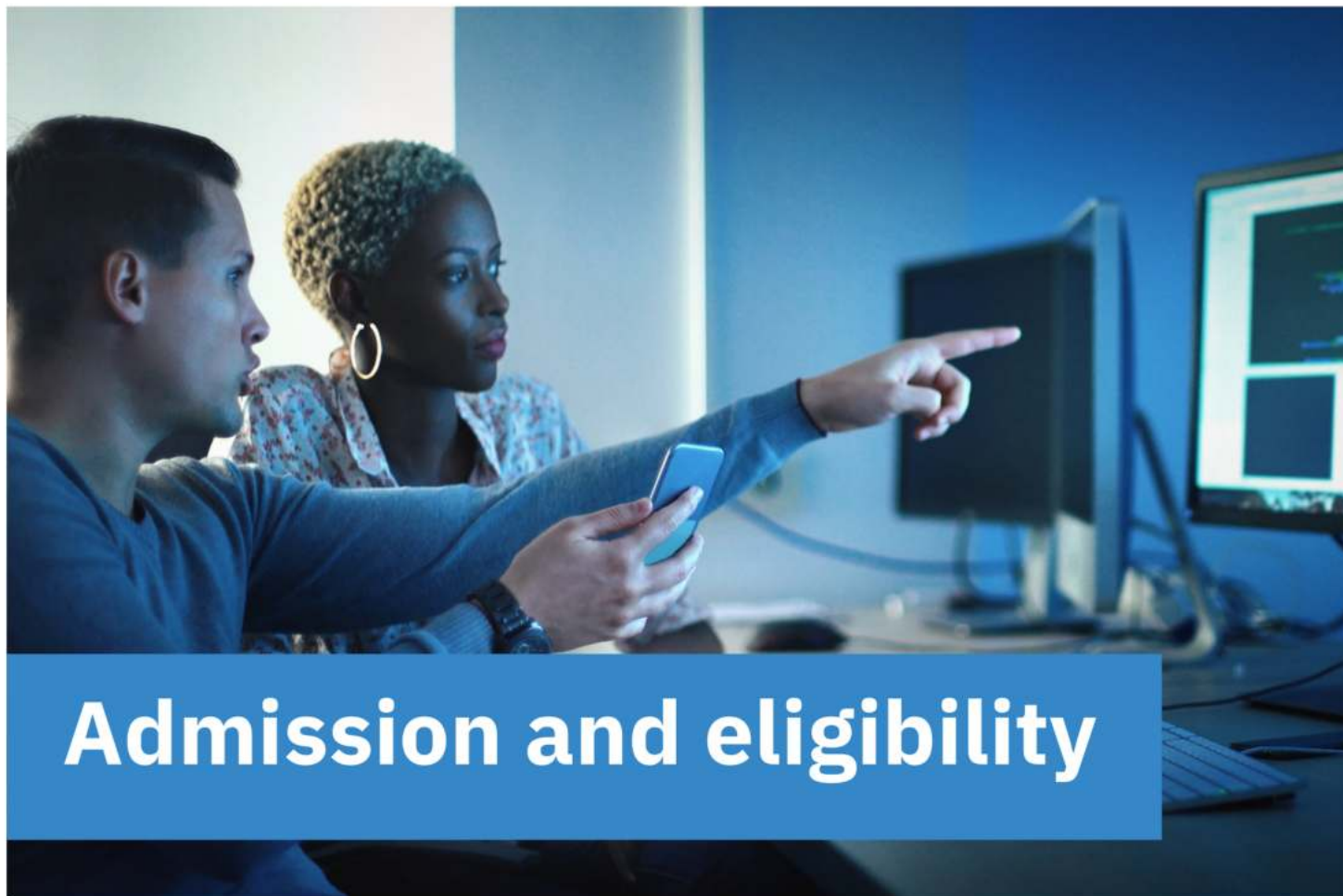
Machine learning

Algorithms and data structures lab

Assessment

- Continuous grading during each course
- Final exams



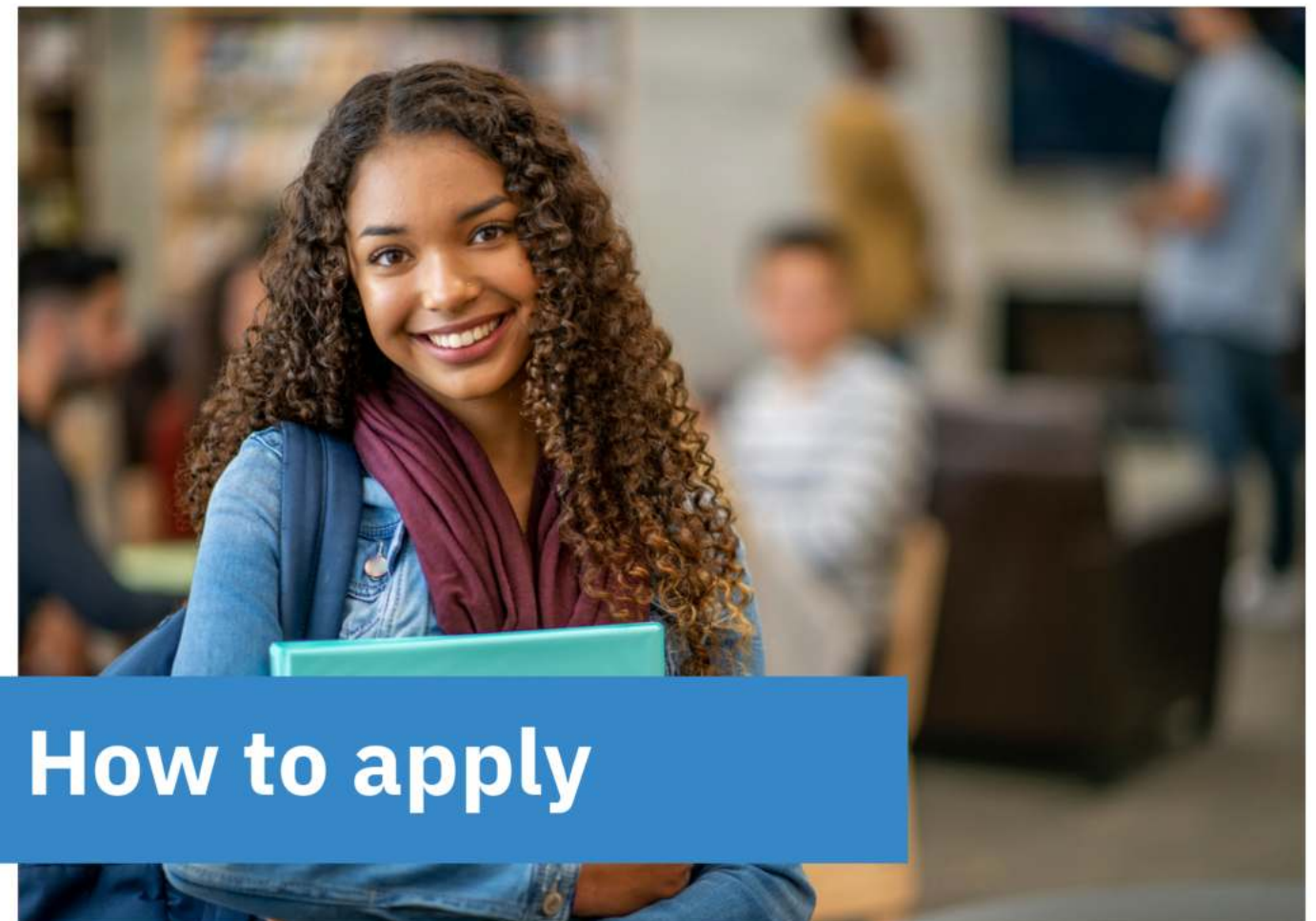


Admission and eligibility

The eligibility assessment, through continuous grading and final exams, ensures a spot in Constructor Institute's [Master of Science programs](#) and qualifies for a tuition fee reduction, bypassing the need for a Bachelor's in computer science. Our selection process operates on a rolling admission basis.*

Benefits

- Automatic entry into MSc in [Computer Science in Software Engineering and Leadership \(CSSEL\) program](#) or [Quantum Software Engineering and Computer Science](#)
- Immediate industry readiness
- Well-equipped for [Constructor Academy's](#) programs
- MSc program tuition fee reduction
- Referral program: Refer your friends and colleagues to our program and receive a 10% reduction on the tuition fee for all referrals.



How to apply

To start the application process, please submit the following required documents by email to caroline.meyer@constructor.org:

- **Proof of identity:** Provide a government-issued national ID or passport
- **University transcripts:** Submit grade transcripts of completed semesters. Include explanations of grading systems if applicable.
- **Diplomas:** Submit a copy of all diplomas received
- **CV:** Describe your academic, professional, extracurricular, and voluntary activities
- **Motivation statement:** Write a 1-page letter explaining your choice of Constructor Institute and what is special about you. If you are interested in applying for a scholarship, please indicate it here.

Optional:

- **Proof of English language proficiency**
- **Recommendation letters**

Your documents should be in English or a Swiss official language (German, French, Italian). Alternatively, you can provide an official English translation.

A Constructor Institute exclusive: 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 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

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 to employers.

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, participation in research projects, and opportunities to access the European job market.



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



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.



C>ONSTRUCTOR
INSTITUTE



Constructor Institute
Rheinweg 9 · 8200 Schaffhausen ·
Switzerland www.institute.constructor.org



› institute.constructor.org

**Knowledge
through science**