Master-Programme
Graduate Studies
2021

TOP-ranked
in the Financial
Times Rankings

*"From insight
to impact"*

Master of Science HSG in Computer Science

Studying Computer Science at the University of St.Gallen? Yes! From the Autumn Semester 2021! Be a pioneer and become part of our latest degree course. We offer you an innovative curriculum for the MSc HSG in Computer Science, either with a focus on Data Science or Software and Systems Engineering. An integral part of the programme is also constituted by the topics which prepare you for a career as a Computer Science entrepreneur or an IT executive. Benefit from our modern curriculum, which combines Computer Science with important skills in business models, digital innovation, entrepreneurship and leadership. Benefit also from our unique campus culture, the HSG's club life and the many opportunities that St.Gallen offers.

This degree course has been set up as part of the IT Education Initiative of the Canton St.Gallen.

Informatik studieren an der Universität St.Gallen? Ja! Ab dem Herbstsemester 2021! Seien Sie Pionier und werden Sie Teil unseres neuesten Studienangebots. Wir bieten Ihnen einen innovativen Studiengang zum MSc HSG in Computer Science, wahlweise mit den Schwerpunkten Data Science oder Software and Systems Engineering. Integraler Bestandteil sind auch Themen, um Sie auf eine Karriere als Informatik-Entrepreneur oder -Führungskraft vorzubereiten. Profitieren Sie von unserem modernen Curriculum, welches Informatik mit wichtigen Kompetenzen zu Geschäftsmodellen, digitaler Innovation, Unternehmertum und Leadership verbindet, aber auch von unserer einzigartigen Campuskultur, dem Vereinsleben an der HSG, und den vielen Möglichkeiten, die St.Gallen bietet.

Die Universität St.Gallen gründet diesen Studiengang im Rahmen der IT-Bildungsoffensive des Kantons St.Gallen.

Sandro Rüttimann
Schweiz

▶ *Find out more about the MSc and its community at:*
msc.unisg.ch

Objectives

The MSc programme in Computer Science will equip you with solid skills – in both theory and application – in one of the focus areas of our programme, as well as in the Computer Science-based courses. Tailored courses on management topics are well integrated into the curriculum. They will help you to develop a personality and a skill set not only as a CS expert, but also as a leader or entrepreneur in a modern, IT-dominated environment. Depending on your intentions, you will either be able to learn to develop cutting-edge technology, or to create a product from it that can be successful on the market! You will benefit from small student groups, close interaction with the computer science faculty, and plenty of possibilities for being of our research projects. A broad variety of events will provide great opportunities for our extend your personal network to the diverse master student communities the HSG.

Student profile

The Master's programme in Computer Science is intended for students with an academic background in a related undergraduate course, such as electrical engineering or mathematics. Prospective students with an undergraduate degree in economics or management will have the opportunity to demonstrate their strong computer science skills during the admission process.

Students are interested in specialising in one of our focal pillars – Data Science and Software and Systems Engineering. The integration of application and business-related topics into the curriculum is an important part of our concept. Therefore, we expect our students to be eager to learn about these topics and to develop the related skills.

The CS program in St.Gallen is brand new – be a pioneer and enjoy being part of a developing story!

Career prospects

Information technology and software are everywhere in today's world. The perspectives for graduates are wide-ranging. You will be well equipped, for example to:

- use data to change the world with Artificial Intelligence technologies
- create autonomous, adaptive and interactive systems to deal with complexity
- develop software products which meet the needs of your customers
- become a tech entrepreneur or an executive in an information technology-related function,
- pursue an academic career and research on topics of the future
- work on interesting innovation projects in a consulting firm

Content and structure

The Master's programme in Computer Science is designed to be studied in tel four semesters and extends to 120 ECTS. You will attend compulsory courses, choose one of the focus areas and complete your curriculum with management courses and electives from contextual studies.
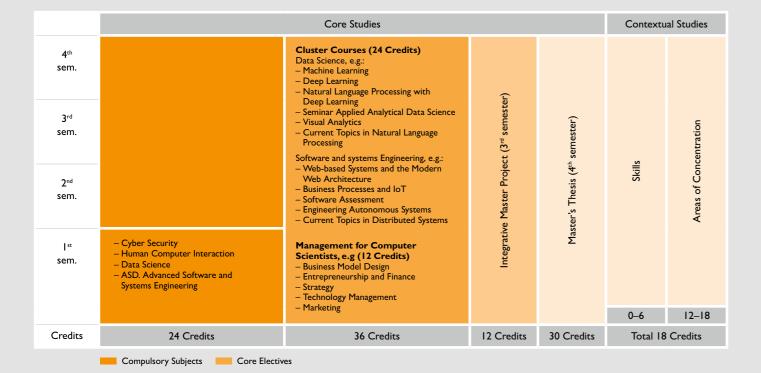
Compulsory courses

You will attend four compulsory courses in Cyber Security, Human Computer Interaction, Data Science and Advanced Software and Systems Engineering, which all provid the foundations of the programme.

Focus areas

You will select one of the focus areas, either Data Science or Software and Systems Engineering. A variety of courses are offered in both focus areas. You may choose the courses which suit your interests best. If you wish to select one or two courses from the other focus area (max. 6 ECTS), feel free to do so! You also choose three courses in Management from the portfolio of tailored courses for the CS Master's.

EN

Programme language
The MCS is taught in English.

	Core Studies				Contextual Studies	
		Cluster Courses (24 Credits) Data Science, e.g.: – Machine Learning – Deep Learning – Natural Language Processing with Deep Learning – Seminar Applied Analytical Data Science – Visual Analytics – Current Topics in Natural Language Processing Software and systems Engineering, e.g.: – Web-based Systems and the Modern Web Architecture – Business Processes and IoT – Software Assessment – Engineering Autonomous Systems – Current Topics in Distributed Systems	Integrative Master Project (3rd semester)	Master's Thesis (4th semester)	Skills	Areas of Concentration
4th sem.						
3rd sem.						
2nd sem.						
1st sem.	– Cyber Security – Human Computer Interaction – Data Science – ASD. Advanced Software and Systems Engineering	**Management for Computer Scientists, e.g (12 Credits)** – Business Model Design – Entrepreneurship and Finance – Strategy – Technology Management – Marketing			0–6	12–18
Credits	24 Credits	36 Credits	12 Credits	30 Credits	Total 18 Credits	

■ Compulsory Subjects ■ Core Electives

Contextual studies

A unique and valuable part of every Master's programme in St.Gallen, contextual studies offers a wide range of topics in Social Sciences. The portfolio seminar enables you to apply your skills from the CS courses in an interdisciplinary context.

Integrative Master's project and Master's thesis

The integrative project will enable you to combine your computer science skills with the insights you gained from your management courses. In an interdisciplinary team, you will apply what you learned on a case, often a real case which has been made available by one of our industry partners. The Master's thesis will enable you to concentrate on a research question in a specialized subject area. You will be supervised by a faculty member and closely connected to her or his research team.

MCS Admission criteria

- An academic degree that is recognized as equivalent, with at least 180 credits
- Applicants with an academic degree from the University of St.Gallen, but not in Computer Science, will have to pass an admission test and prove an adequate knowledge in computer science.
- Applicants with an academic degree from another discipline, which is only partly recognized as equivalent, will have to pass an admission test and provide evidence of an adequate knowledge of computer science.

The admission criteria may be subject to change. Please consult our website for the latest detailed admission criteria:
⤢ admissions.unisg.ch

Contact

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