

LEVEL UP!

Bachelor

Master

Studies in Informatics
Informatikstudium
ifi.uzh.ch/studies



University of
Zurich^{UZH}



Studying Informatics at the University of Zurich

The University of Zurich offers the widest range of study courses in Switzerland and is the country's biggest university. The Department of Informatics (in German: *Institut für Informatik*, IfI), founded in 1970, is part of the Faculty of Business, Economics and Informatics at the University of Zurich, and is accredited by AACSB and EQUIS. Due to its affiliation to business and economics, the IfI provides an interface between economy and informatics. This has immense future potential in this period of digitalisation.

IfI students learn to shape the digital world of tomorrow – whether in online trading, health care, finances, or media.

IfI students are curious and have an interest in:

- solving complex problems
- abstract thinking
- working systematically and with accuracy
- topics of communication and communication skills
- interdisciplinary teamwork

What we offer

We dedicate a large part of our research efforts and our teaching on human-centered informatics.

As of 2021, 19 professors, 18 post-doctoral researchers, and more than 70 PhD students are teaching, studying, and performing first-class research at IfI. About 950 students – almost 500 in the Bachelor programs, almost 450 in the Master programs – benefit from up-to-date, sustainable study programs that meet the highest quality standards.

Our specializations on the Bachelor's level are targeted mainly at Swiss gymnasium students and are held in German and English:

- Wirtschaftsinformatik (Information Systems)
- Softwaresysteme (Software Systems)
- Informatik und Naturwissenschaften (Informatics with Natural Sciences)

On the Master's level all lectures are held in English. They are targeted at our own Bachelor students as well as international students. The following specializations are available:

- Information Systems
- Software Systems
- People-Oriented Computing
- Artificial Intelligence
- Data Science

IfI students select their Minor program from a large variety of options – according to their preferences. In this way they form their education to an individual specialization and enhance their job market opportunities.

Drei BSc-Studienprogramme (Major) 180 ECTS Credits

Wirtschaftsinformatik	Softwaresysteme	Informatik mit Naturwissenschaften
WI	SOSY	INW

Bachelorarbeit
18 ECTS

Freier Wahlbereich
15 ECTS

Minor* 30 ECTS	Minor* 30 ECTS	Minor in Naturwissenschaften 60 ECTS
Pflichtmodul WI 30 ECTS	Pflichtmodul SOSY 30 ECTS	

Gemeinsames Pflichtprogramm
27 ECTS

Assessment
60 ECTS

3. – 6. Semester

1. & 2. Semester

* Als Nebenfach kann ein anderer Schwerpunktbereich oder ein Nebenfach in Wirtschafts-, Natur- oder Geisteswissenschaften belegt werden.



Wirtschaftsinformatik studieren

Themen, Ziele, Schwerpunkte

Der Einfluss von IT-Systemen auf die Wirtschaft und damit auch auf die Gesellschaft nimmt immer mehr zu. Die Digitalisierung verändert Geschäftsprozesse und Arbeitsweisen zum Teil fundamental und lässt neue Geschäftsfelder entstehen: Online-Handel, digitale Dienstleistungen, Home-Office – das sind nur ein paar Beispiele für diese Transformation.

Mit dem Bachelorstudium der Informatik mit Schwerpunkt Wirtschaftsinformatik können Sie diese Veränderungen aktiv mitgestalten. Sie erwerben die grundlegenden Kenntnisse der Informatik und Betriebswirtschaftslehre, um Probleme und Informationsbedürfnisse in Organisationen zu analysieren und dann entsprechende Informationssysteme zu entwickeln, anzupassen und einzusetzen.

Studienverlauf

Das Bachelorstudium basiert auf einer methodisch und inhaltlich breiten wissenschaftlichen Grundausbildung und umfasst in der Regel sechs Semester. Im Rahmen eines Hauptfach- (150 ECTS Credits) und eines Nebenfachstudienprogramms (30 ECTS Credits) müssen 180 ECTS Credits erworben werden.

Das Hauptfachstudienprogramm besteht aus einer Assessment- und einer Aufbaustufe. Das Assessment (60 ECTS Credits) vermittelt Grundlagen in Informatik, Wirtschaftswissenschaften, Mathematik und Statistik. In der Aufbaustufe fokussiert das allgemeine Pflichtprogramm auf zentrale Gebiete der Informatik und vermittelt Grundlagen des wissenschaftlichen Arbeitens. Parallel dazu beginnt die studienfachspezifische Ausbildung. Im Schwerpunktbereich Wirtschaftsinformatik sind Pflicht-, Wahlpflicht- und Wahlmodule in Wirtschaftsinformatik und Betriebswirtschaftslehre zu absolvieren. Die Bachelorarbeit (18 ECTS Credits) bildet den Abschluss des Studiums.

Berufsperspektiven

Der Abschluss in Wirtschaftsinformatik eröffnet Ihnen hervorragende Berufsperspektiven an der Schnittstelle von Wirtschaft und Informatik. Sie planen, erproben und leiten den Einsatz von IT-Systemen, beraten Unternehmen und optimieren Geschäftsprozesse, gestalten im Management eines Unternehmens den IT-Bereich mit. Der Bachelorabschluss qualifiziert Sie ausserdem für ein weiterführendes Studium auf Masterstufe.

Besondere Hinweise

Verschiedene studentische Vereine sowie die Alumni-Vereinigungen bieten Ihnen ein sehr breites Angebot an Events und Informationen rund um das Studium. Dank der guten internationalen Vernetzung der Universität Zürich haben Sie zudem die Möglichkeit, an diversen Austauschprogrammen teilzunehmen.

Weitere Informationen

Zentrale Kontaktadressen

www.uzh.ch/contact

Beratungsstellen rund ums Studium

www.uzh.ch/studies/infoadvice/advice

Studienangebot der
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www.oec.uzh.ch/studies

Alle Studiengänge der UZH

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Softwaresysteme studieren

Themen, Ziele, Schwerpunkte

Von der Armbanduhr bis zur Weltraumstation – ohne Software läuft heute fast nichts mehr. Der moderne Alltag ist ohne Apps kaum noch vorstellbar, Software ist zum entscheidenden Treiber von Innovation geworden. Wollen Sie die Veränderung der Welt durch Software aktiv mitgestalten?

Das Bachelorstudium der Informatik mit Schwerpunkt Softwaresysteme gibt Ihnen die notwendigen Grundlagen dazu. Sie lernen, wie man softwarebasierte Systeme systematisch und wirtschaftlich entwickelt, einsetzt und aktuell hält. Das Spektrum reicht dabei von kleinen Apps und Web-Anwendungen über Systeme zur Datenverwaltung bis hin zu global vernetzten Softwaresystemen.

Software untersteht einem Lebenszyklus: Die Anforderungen werden ermittelt, das Design und der strukturelle Aufbau festgelegt. Nach der Implementierung wird die Software eingesetzt, weiterentwickelt und irgendwann abgelöst. Im Studium lernen Sie diese Schritte im Detail kennen, auch die damit verbundenen Probleme – und Lösungen.

Studienverlauf

Das Bachelorstudium basiert auf einer methodisch und inhaltlich breiten wissenschaftlichen Grundausbildung und umfasst in der Regel sechs Semester. Im Rahmen eines Hauptfach- (150 ECTS Credits) und eines Nebenfachstudienprogramms (30 ECTS Credits) müssen 180 ECTS Credits erworben werden.

Das Hauptfachstudienprogramm besteht aus einer Assessment- und einer Aufbaustufe. Das Assessment (60 ECTS Credits) vermittelt Grundlagen in Informatik, Wirtschaftswissenschaften, Mathematik und Statistik. In der Aufbaustufe fokussiert das allgemeine Pflichtprogramm auf zentrale Gebiete der Informatik und vermittelt Grundlagen des wissenschaftlichen Arbeitens. Parallel dazu beginnt die studienfachspezifische

Ausbildung. Im Schwerpunktbereich Softwaresysteme sind Pflicht-, Wahlpflicht- und Wahlmodule in softwarebezogenen Themen der Informatik zu absolvieren. Die Bachelorarbeit (18 ECTS Credits) bildet den Abschluss des Studiums.

Berufsperspektiven

Der Abschluss in Softwaresysteme ermöglicht Ihnen, nicht nur in der Softwareindustrie, sondern auch in IT-Abteilungen von Unternehmen aller Art als Software Engineer zu arbeiten. Sie konzipieren, entwickeln und verbessern Softwaresysteme. Dabei können Sie sich den Herausforderungen verteilter, mobiler und adaptiver Systeme stellen und mit grossen Datenbeständen umgehen.

Der Bachelorabschluss qualifiziert Sie ausserdem für ein weiterführendes Studium auf Masterstufe.

Besondere Hinweise

Verschiedene studentische Vereine sowie die Alumni-Vereinigungen bieten Ihnen ein sehr breites Angebot an Events und Informationen rund um das Studium. Dank der guten internationalen Vernetzung der Universität Zürich haben Sie zudem die Möglichkeit, an diversen Austauschprogrammen teilzunehmen.

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Informatik mit Naturwissenschaften studieren

Themen, Ziele, Schwerpunkte

In den Naturwissenschaften spielt Informatik mittlerweile eine entscheidende Rolle. Ob Biologie, Geographie oder Mathematik – ohne Computer läuft nichts mehr. Das Bachelorstudium der Informatik mit Schwerpunkt Informatik mit Naturwissenschaften verbindet die Grundlagen der Informatik mit einem Fach der Naturwissenschaften Ihrer Wahl.

Je nach naturwissenschaftlichem Gebiet fokussieren Sie sich auf Methoden zur Auswertung und Darstellung von Daten, auf die Abbildung von naturwissenschaftlichen Prozessen oder auf das Design von Informatiksystemen zur Lösung von Fragestellungen aus der Naturwissenschaft. Dieses Studienprogramm ermöglicht Ihnen ausserdem ein Lehramtsstudium mit Informatik als Hauptfach und Ihrem naturwissenschaftlichen Wahlgebiet als zweitem Unterrichtsfach.

Studienverlauf

Das Bachelorstudium basiert auf einer methodisch und inhaltlich breiten wissenschaftlichen Grundausbildung und umfasst in der Regel sechs Semester. Es müssen 180 ECTS Credits erworben werden, wobei das Hauptfachstudienprogramm Informatik mit Naturwissenschaften (120 ECTS Credits) durch ein Nebenfachstudienprogramm (60 ECTS Credits) der Mathematisch-naturwissenschaftlichen Fakultät ergänzt wird.

Das Hauptfachstudienprogramm besteht aus einer Assessment- und einer Aufbaustufe. Das Assessment (60 ECTS Credits) vermittelt Grundlagen in Informatik, Wirtschaftswissenschaften, Mathematik und Statistik. In der Aufbaustufe fokussiert das allgemeine Pflichtprogramm auf zentrale Gebiete der Informatik und vermittelt Grundlagen des wissenschaftlichen Arbeitens. Parallel dazu beginnt die studienfachspezifische Ausbildung, in der Pflichtmodule in Informatik absolviert werden. Die Bachelorarbeit (18 ECTS Credits) bildet den Abschluss des Studiums.

Berufsperspektiven

Mit einer soliden Basis in Informatik und spezifischen naturwissenschaftlichen Kenntnissen sind Sie an der Schnittstelle von zwei Wissensgebieten tätig. In Kombination mit einem Lehramtsstudium können Sie auch an einem Gymnasium Informatik und das von Ihnen gewählte naturwissenschaftliche Fach unterrichten.

Der Bachelorabschluss qualifiziert Sie ausserdem für ein weiterführendes Studium auf Masterstufe, etwa im Schwerpunktbereich Data Science.

Besondere Hinweise

Verschiedene studentische Vereine sowie die Alumni-Vereinigungen bieten Ihnen ein sehr breites Angebot an Events und Informationen rund um das Studium. Dank der guten internationalen Vernetzung der Universität Zürich haben Sie zudem die Möglichkeit, an diversen Austauschprogrammen teilzunehmen.

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Five Major MSc study programs **90 ECTS credits**

Information Systems IS	Software Systems SOSY	People-Oriented Computing POC	Artificial Intelligence AI	Data Science DS
Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS
Master's project 15 ECTS				
Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS
INF elective area 15 ECTS				
WWF elective area 6 ECTS				
Master's thesis 30 ECTS				

Minor study program of choice **30 ECTS credits**

- Informatics
- Information Systems
- Data Science
- Economics
- Business Administration
- Banking and Finance

Exemplary illustration. The framework ordinance and program regulations in their current versions have legal validity.



Additional information

- Application and admission
www.uzh.ch/en/studies/application
- Academic programs of the Faculty of Business, Economics and Informatics
www.oec.uzh.ch/en/studies
- Information and advice
www.uzh.ch/en/studies/infoadvice
- All Master's degree programs of UZH
www.degrees.uzh.ch/en/master
- Central contacts
www.uzh.ch/en/contact



Studying Information Systems

Topics and Goals

Today's information and communication systems have a significant impact on the economy and society. They shape and change business processes within organizations, influence the ways in which we work, and open up new areas of business such as e-commerce and electronic services.

You have laid a foundation by completing your Bachelor's studies. In the Master's study program in Information Systems, you will broaden and deepen the knowledge you acquired during your Bachelor's study program, with the aim of enabling you to play an active role in shaping the changes that the economy experiences through informatics.

You will combine methods from the spheres of both informatics and management science, allowing you to take a holistic, comprehensive approach toward solving the problems that companies face. The program's emphasis is on the design and management of information systems and IT-based innovations.

Admission

The Faculty of Business, Economics and Informatics observes an open, quality-focused admissions policy based on the admissions regulations of UZH as well as its own regulations and practices.

In order to be admitted to a Master's degree program, you must meet the requirements set out in the «Ordinance on Admission to Studies at the University of Zurich». Students Services review the application in this regard. The Faculty will then subject the application documents to a specialized academic review and determine the applicant's level of study. The decision is based on an

evaluation of the curriculum of the program of studies completed, as well as other documents.

Categorization is only subject to a specialized academic review in the case of the major study program. It is carried out for the major program for which you have applied. Complementary to the major program, the minor program can be freely selected in line with the regulations. It is your responsibility to bridge any gaps, if applicable.

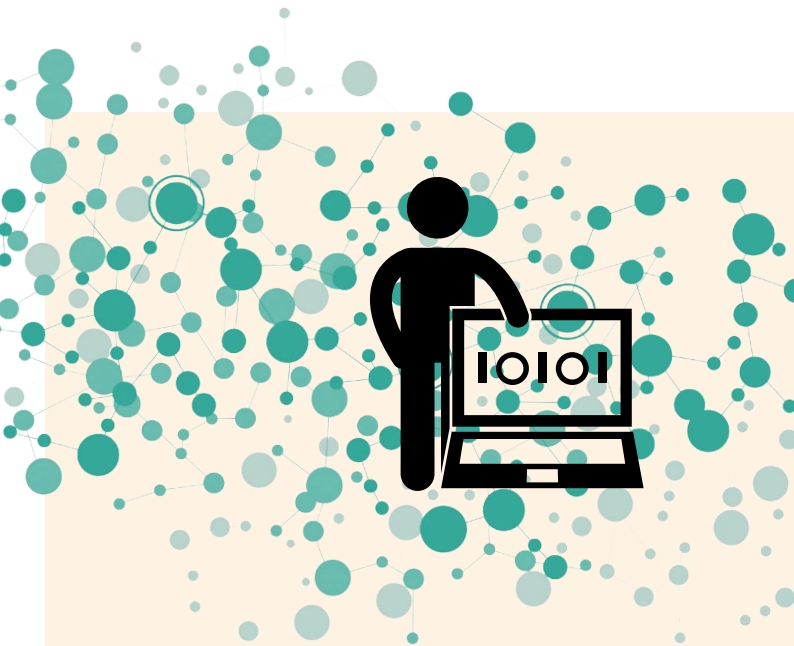
Career Prospects

As an information systems specialist with a Master's degree, you will have excellent career prospects at the juncture between business and informatics: you will work in demanding roles in business and administration where, as a business analyst for example, you will plan, test and direct the use of IT systems; consult on technical and organizational issues; manage corporate IT departments; create IT-based innovations and business models; or function as a methodically trained specialist.

Moreover, graduates with the right aptitude have the opportunity to complete a doctorate, an outstanding foundation for an academic career.

Special Notes

Various student organizations as well as alumni associations offer you a wide range of events and information concerning your studies. What's more, the University of Zurich's excellent international network will give you the opportunity to participate in a variety of exchange programs.



Studying Software Systems

Topics and Goals

Software as well as software-based systems have led to our world experiencing profound changes over the last 50 years. Software has become one of the key drivers of innovation.

You have laid a foundation by completing your Bachelor's studies. In the Master's study program in Software Systems, you will broaden and deepen the knowledge you acquired during your Bachelor's study program, with the aim of enabling you to play an active role in shaping the changes that the world experiences through software.

This study program focuses on the question of how to develop software-based systems in a systematic, economically efficient way, as well as how to use them and keep them up to date. It looks at everything from small apps and web applications to data management systems and all the way through to super-scaled systems networked on many levels.

Admission

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Career Prospects

With the in-depth knowledge gained during the Master's study program in Software Systems, you will be in demand in both the software industry and in the IT departments of all kinds of companies, where you will be assigned demanding tasks in roles such as software engineer, app developer, chief information officer – or you launch a startup.

Moreover, graduates with the right aptitude have the opportunity to complete a doctorate, an outstanding foundation for an academic career.

Special Notes

Various student organizations and alumni associations offer you a wide range of events and information concerning your studies. What's more, the University of Zurich's excellent international links will give you the opportunity to participate in a variety of exchange programs.



Studying People-Oriented Computing

Topics and Goals

Informatics has a profound impact on humans and society, significantly changing patterns of communication, information, and social interaction in both our private and working lives. Conversely, it is people who are behind the forward march of informatics and who shape the informatics-based systems that change our world. Gone are the days when informatics was simply about solving problems using algorithms.

You have laid a foundation by completing your Bachelor's studies. In the Master's study program in People-Oriented Computing, you will broaden and deepen the knowledge you acquired during your Bachelor's study program, with the aim of enabling you to help shape information technology in a way that focuses on people and gain a better understanding of the interaction that takes place between people and computers.

Admission

The Faculty of Business, Economics and Informatics observes an open, quality-focused admissions policy based on the admissions regulations of UZH as well as its own regulations and practices.

In order to be admitted to a Master's degree program, you must meet the requirements set out in the «Ordinance on Admission to Studies at the University of Zurich». Students Services review the application in this regard. The Faculty will then subject the application documents to a specialized academic review and determine the applicant's level of study. The decision is based on an evaluation of the curriculum of the program of studies completed, as well as other documents.

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Career Prospects

With a Master's degree in Informatics, you will be in demand as a specialist who develops sophisticated, user-friendly software. Furthermore, the in-depth knowledge gained during the Master's study program will enable you to take on demanding tasks in roles such as project manager, interaction architect, analyst or consultant in any field involving the people-oriented design of information technologies and their effects on business and society.

Moreover, graduates with the right aptitude have the opportunity to complete a doctorate, an outstanding foundation for an academic career.

Special Notes

Various student organizations as well as alumni associations offer you a wide range of events and information concerning your studies. What's more, the University of Zurich's excellent international links will give you the opportunity to participate in a variety of exchange programs.



Studying Artificial Intelligence

Topics and Goals

Artificial Intelligence is today's most important area of computer science. AI is everywhere: It recognizes what you say to Siri, Alexa, or Ok Google; it identifies faces or objects when you take pictures with your smartphone and upload them to Facebook or Instagram; it diagnoses tumors in medical images, or enables cars to understand the environment and drive by themselves. The goal is to implement intelligent behavior, such as the capability to learn and improve from experience, into machines or just any computer program. The major study program in Artificial Intelligence provides you with foundations and advanced skills, such as deep and machine learning, computer graphics, robotics vision, natural language processing, coordination of complex systems, as well as algorithmic and statistical skills.

Admission

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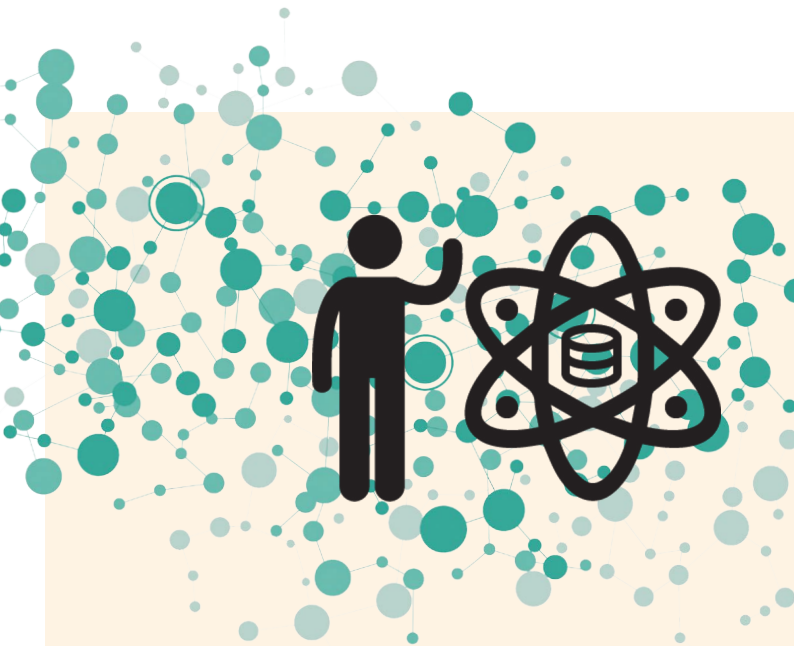
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Career Prospects

Knowledge of AI is today one of the most demanded expertises required by companies when hiring. Students graduating from this program will be able to apply their knowledge in many areas such as robotics, business forecasting, video games, computer vision, intelligent search, chat bots, medical diagnostics, and more. Moreover, graduates with the right aptitude have the opportunity to complete a doctorate, an outstanding foundation for an academic career.

Special Notes

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Studying Data Science

Topics and Goals

Big data and data-based decisions are among the greatest challenges facing us both today and in the future, given the lightning speed at which data is gathered, the vast quantities in which it is stored, and the constant new ways in which it is linked. How are these large and complex stocks of data processed and made usable? And how do you extract knowledge from data?

You have laid a foundation by completing your Bachelor's studies. At Master's level, you will deepen your knowledge through more practical-oriented work. In the Master's study program in Data Science, you will learn how to carry out professional analyses of large data quantities, recognize patterns, demonstrate relationships, and prepare results in appealing, interactive formats.

Drawing on techniques and theories from a range of fields including statistics, informatics, and cognitive sciences, this will give you the foundations for making strategic and operational decisions for individuals, companies, organizations, and society as a whole.

Admission

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Career Prospects

With a Master's degree in Informatics, you will be one of the few informatics specialists in Switzerland who focus particularly in analyzing and processing data – a field with a huge potential for the future. The spectrum of potential employers ranges from major companies in the service sector and international IT companies to specialized small firms.

Moreover, graduates with the right aptitude have the opportunity to complete a doctorate, an outstanding foundation for an academic career.

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