Master of Science (MSc)
Information Systems

WIRTSCHAFTS
UNIVERSITÄT
WIEN VIENNA
UNIVERSITY OF
ECONOMICS
AND BUSINESS

EFMD
EQUIS
ACCREDITED

"Knowledge that does not steadily increase decreases, a proverb goes. There is no better way to describe the term 'knowledge society'. This is why, IBM invests heavily in research and development. Knowledge is also essential for Austria as a business location, which means that we urgently need an education center. To me, WU Vienna University of Economics and Business is one of the key players in this context, and we have maintained a spirit of partnership for a long time, to our mutual benefit."

(Tatjana Oppitz, CEO IBM Austria)

Master Program in Information Systems

A rigorous selection process and our highly qualified faculty ensure the highest quality standards.

DEAR PROSPECTIVE STUDENTS,

The Master Program in Information Systems provides students with IT-related knowledge and skills with a particular emphasis on management and research topics. Five different WU Departments cooperate in this transdisciplinary program, supporting its leading position with their highly qualified researchers and lecturers. The curriculum allows students to individualize their studies, and encourages them to reflect on what they have learned in a holistic context. Working independently and accepting responsibility for their work are additional important skills learned.

A wide selection of electives gives students the opportunity to acquire a well-rounded education in the field of information technologies. Specialization options early in the program give students sufficient time to acquire profound specialist knowledge.

A well-balanced mix of theory and practice and the inclusion of state-of-the-art research findings give graduates the tools they need to question standard practices and develop innovative solutions.

The Master in Information Systems was designed together with a board of leading Austrian stakeholders from industry and government to meet today's challenges and to provide a solid basis for tomorrow's demands.

Gustaf Neumann
Program Director Information Systems

MSc Information Systems

Contents and Structure

The curriculum ensures that students acquire a well-balanced mix of theoretical and practical knowledge. It consists of twelve compulsory core courses (the common body of knowledge) and various elective blocks, including three IT specializations and several competence areas.

The program follows the European "Design Science" approach: using Information Systems technology to actively improve the way companies conduct their business. Students learn to use modern information technologies to shape business processes according to IT's potential and to optimize business information systems to meet business demands. Graduates have learned to develop operational structures and business processes, as well as the necessary technological systems.

After graduation, students are qualified for a wide spectrum of careers. Some of our graduates choose to become analysts and managers in IT departments of large companies, others excel as specialists in IT firms (hardware, software, services), some focus on business consulting or decide to found their own start-up companies.

FIRST YEAR

The first year provides the basic knowledge mandatory for all students. It covers IT/business alignment aspects as well as IS management and IS development aspects. The courses are divided into three building blocks:

IS and Organizations
› Enterprise Information Systems, Interorganizational Information Systems, Management Support Systems
› Business Process Management, IT-Driven Innovation Management, Business Process Languages, Process Mining, Reference Models
› Data Mining and Decision Support Systems, Clustering, Classifications, Machine Learning, Pattern Recognition, Social Network Analysis

Management and IS
› Innovation Management and Strategies, IT Business Models, IT Business Plans, IT Business Cases, Due Diligence, Entrepreneurship

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› IT Governance and Controlling, IT Evaluation and Investments, IT Project Management, IT Performance
› Management, IT Support Frameworks
› IT Strategy, IT/Business Alignment, IT Sourcing Strategies, IT Product Lifecycle, IS Portfolio Management, IT Change Management
› Legal Aspects of Information & Communication Technology, Intellectual Property Rights, eContracting, eSignatures, Software Law

IS Development
› Database Systems, Enterprise Data Models, Transaction Management, Data Warehouses, Data Quality Management
› Distributed Systems, Distributed Services, Service Architectures, Cloud Computing, Event-Driven Architectures, Enterprise Service Bus, Peer-to-Peer-Computing, Remoting Patterns
› Information Systems Development,
› Agile Software Development, Requirements Engineering, Modeldriven Software Development, Meta-Modeling, Software Architectures, Flexibility Management, Domain-Specific Languages, Software Quality Management
› User-Centered IS Design, Cooperative/Participatory Design, Cognitive System Engineering, Usability and User Experience Testing
› Theory of Computation, Graph Structures, Automata and Language Theory, Finite State Machines, Grammars, Complexity Theory, Undecidability

SECOND YEAR
Building on this foundation, the second year of study offers a selection of IT specializations. Each student chooses one IT specialization and either a second IT specialization or two of the competence areas.

Currently, specializations are offered in:
› Information Systems Service Management
› Information Systems Processes
› Information Systems Engineering

Competence areas:
› Business Analytics
› ICT Law
› Information Systems Management and Accountability
› Sustainable Information Systems
› Spatial Business Intelligence

For details about the program structure, please visit our website:
wu.ac.at/masters/en/is

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PROGRAM STRUCTURE*			120 ECTS
Information Systems and Organizations	**Information Systems and Management**	**Information Systems and Development**	
› Business Information Systems › Business Process Management › Data Mining and Decision Support Systems	› Innovation Management › IT Governance and Controlling › IT Strategy › Introduction to IT Law	› Database Systems › Distributed Systems › IS Development › User-Centered IS Design, Strategy and Technology › Theory of Computation	
14 ECTS	16 ECTS	20 ECTS	50 ECTS

Choice of Electives (Two IT Specializations or one IT Specialization and two competence areas)		
IT Specializations	**Competence Areas**	
› Information Systems Service Management › Information Systems Processes › Information Systems Engineering	› (Business Analytics)** › ICT Law › IS Management and Accountability › Spatial Business Intelligence › Sustainable Information Systems	
20 ECTS each	10 ECTS each	40 ECTS
Master Thesis		30 ECTS

** is expected to be available in the fall of 2015

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Qualification Profile and Career Prospects

Economic cooperation and globalization are progressing at a rapid pace. Information systems make world-wide business transactions possible. Therefore, the combination of business knowledge with information technology skills is a particularly promising professional field for the future.

Graduates of WU's Information Systems MSc program have acquired skills ranging from software development, for example modeling software systems, to implementing new technologies in a business context and analyzing the effects of systems on individual organizations and/or their environments.

Possible professional applications include but are not limited to
› Software engineering: Designing, developing and launching business application systems, e.g. based on internet technologies.

› Research: Theoretical and applied research on new forms of designing and using information technologies.
› Business consulting: User support in product planning, implementation and product use, as well as planning and holding training sessions.
› Marketing: Marketing innovative hardware and software products.

Graduates have learned how to find creative solutions for the design and continuous development of business information systems, to implement new business ideas and improvements, and to react to changing market conditions.

"WU's IS program unifies a management-oriented approach with expert-level methodology. A broad common body of knowledge provides largely timeless fundamentals that provide the connection to current research. This is a master program I can recommend unconditionally."

Josef Matulka, COO, Capgemini Austria

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Admissions Criteria

To be admitted to the program, applicants must undergo a comprehensive selection process to keep quality standards high. We are looking for ambitious Austrian and international students with outstanding qualifications and excellent social skills.

The following requirements apply to the Master in Information Systems:

ONLINE APPLICATION

The first step in the admission process is the online application. Candidates need to fulfill the following requirements:

› A relevant bachelor degree or other equivalent degree program (worth at least 180 ECTS credits) which fulfills at least one of the following requirements:
  › Examinations in information systems and/or computer science worth a minimum of 60 ECTS credits
  › Examinations in mathematics and/or statistics worth a minimum of 60 ECTS credits

› One of the following: a valid GMAT or two letters of recommendation

Proof of English proficiency (one of the following):
› English as native language
› Full Bachelor program taught in English (at least 3 years, university confirmation required)
› One of the following certificates: valid TOEFL 600/250/100, valid IELTS 7.0, valid TOEIC 800, CAE (Certificate of Advanced English), CPE (Certificate of Proficiency in English), BEC Higher (Business English Certificate Higher), UNIcert III

For further information on the application requirements and admission process in general, please visit the program's website at **wu.ac.at/master/en/is**

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Program Faculty

Five different WU departments cooperate in this trans-disciplinary program, contributing to its leading position with their highly qualified researchers, lecturers, and guest professors.

FACULTY

DEPARTMENT OF INFORMATION SYSTEMS AND OPERATIONS

Edward Bernroider, Head of the Institute for Information Management and Control
Roman Brandtweiner, Deputy Head of the Institute for Information Management and Control
Rony G. Flatscher, Deputy Department Head, Institute for Management Information Systems
Werner Jammernegg, Head of the Institute for Production Management
Jan Mendling, Head of the Institute for Information Business
Andreas Mild, Institute for Production Management
Johann Mitlöhner, Institute for Information Business
Gustaf Neumann, Program Director; Head of the Institute for Information Systems and New Media
Alexander Prosser, Institute for Production Management
Stefan Sobernig, Institute for Information Systems and New Media
Sarah Spiekermann, Head of the Institute for Management Information Systems
Mark Strembeck, Deputy Program Director, Deputy Head of the Institute for Information Systems and New Media
Volker Stix, Institute for Information Business
Alfred Taudes, Department Head, Institute for Production Management

DEPARTMENT OF BUSINESS, EMPLOYMENT AND SOCIAL SECURITY LAW

Clemens Appl, Information Law and Intellectual Property Law Group
Martin Winner, Head of the Information Law and Intellectual Property Law Group

DEPARTMENT OF SOCIOECONOMICS

Manfred M. Fischer, Head of the Institute for Economic Geography and GIScience
Petra Staufer-Steinnocher, Institute for Economic Geography and GIScience

DEPARTMENT OF FINANCE, ACCOUNTING AND STATISTICS

Ronald Hochreiter, Institute for Statistics and Mathematics
Kurt Hornik, Head of the Institute for Statistics and Mathematics
Josef Leydold, Institute for Statistics and Mathematics

DEPARTMENT OF STRATEGY AND INNOVATION

Nikolaus Franke, Head of the Institute for Entrepreneurship and Innovation
Peter Keinz, Institute for Entrepreneurship and Innovation

PROGRAM MANAGEMENT

Eveline Dietz, Program Coordinator

Application and Admissions at WU

Selection procedures apply for all English-taught MSc programs. WU employs a rolling admissions policy with three priority deadlines.

APPLICATION

The rolling admissions policy allows students to apply from the beginning of September until spring. Submitted applications are batched and processed according to so-called priority deadlines. This means that the processing of applications submitted after a particular priority deadline will be delayed until after the next deadline. The first step in the application process is an online application. To keep quality standards high, all of WU's English-taught MSc programs are open to only a limited number of students. For this reason, all applicants are subject to a comprehensive selection process.

PROFICIENCY IN ENGLISH

Applicants must provide proof that they have a sufficient command of the English lanuage (e.g. TOEFL 600/250/100, IELTS 7.0, CAE Certificate in Advanced English, English as a mother tongue, or a bachelor degree with English as language of instruction).

ADMISSIONS

Students selected for admission must come to WU's Admissions Office in person to enroll. Detailed information on the documents required are available online: **wu.ac.at/prospective/en/admission/international**

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ACADEMIC CALENDAR

At WU, the academic year is divided into two semesters. The winter semester starts in October and ends in February. It is followed by the summer semester, which runs until the end of June. Summer vacation is in July, August, and September. All English-taught master programs start in the winter semester. Detailed information on enrollment deadlines and WU's academic calendar can be found on the WU website under **wu.ac.at/students/en/org/calendar**

TUITION FEES

No tuition fees apply for EU citizens during the standard duration of their program (plus two extra semesters). All those exceeding the standard duration, however, are required to pay a tuition fee of approximately € 360 per semester. Non-EU students are required to pay € 726.72. Under certain circumstances, the same regulations that apply to EU citizens can apply to non-EU students as well.

To find out more, please visit
wu.ac.at/students/en/org/tuition

SCHOLARSHIPS

WU does not offer any traditional scholarships. However, if certain conditions apply, WU does have two financial aid programs that provide need-based and merit-based scholarship grants. For further information, please contact WU's Study Regulations Office (**wu.ac.at/structure/en/servicecenters/regulations**) or visit the Austrian Database for Scholarships and Research Grants (OeAD) website at **grants.at**

ORGANIZING YOUR STUDIES AT WU

› **Getting started**
  WU offers comprehensive information for international students on its website.
› **Housing**
  A cooperation with the OeAD Housing Office guarantees WU a certain quota of student residences each year.
› **Bridging courses**
  Students who want to refresh their skills before courses start are welcome to attend bridging courses.
› **Online services**
  A wide selection of online services is available to students on WU's website **wu.ac.at** and WU's eLearning platform **Learn@WU**
› **The Austrian Students' Union at WU**
  The Austrian Students' Union (ÖH) represents the interests of all WU students and offers them a wide spectrum of services.
› **Student jobs at WU**
  WU students have many opportunities to actively participate in student and campus life.
› They may, for instance, choose to become course tutors, join one of our academic units as student staff members, or get involved with the Students' Union.
› **Centrally located**
  WU is easily accessible by public transport, and only a few minutes away from the city center.

WU Key Data

2014/15	
Students	
Total students (fall 2014)	22,809 (47% women)
International students (fall 2014)	6,183 (47% of total)
Incoming exchange students	~1,000 per year
Outgoing exchange students	~1,000 per year
Faculty and Staff[1]	
Total faculty[2]	478 (43% women)
Administrative staff	496 (68% women)
Total	1,110 (55% women)
Campus Resources	
Premises Campus WU	100,000 m²
Premises Library	
Total floor space	7,200 m²
Volumes	~830,000
International	
Partner universities	~230
Courses in English	~450/semester

Graduate Programs

German-taught MSc programs
› Business Education
› Business Law (LL.M.)
› Economics
› Export and Internationalization Management
› Finance and Accounting
› Management
› Socioeconomics
› Taxation and Accounting

English-taught MSc programs
› Information Systems
› International Management/CEMS
› Marketing
› Quantitative Finance
› Socio-Ecological Economics and Policy
› Strategy, Innovation, and Management Control
› Supply Chain Management

German-taught doctoral/PhD programs
› Doctoral Program in Business Law (Dr. iur.)
› Doctoral Program in Social and Economic Sciences[3]
› PhD in Economics and Social Sciences[3]

English-taught doctoral/PhD programs
› PhD in International Business Taxation
› PhD in Finance

[1] 2014 in full-time equivalents
[2] not including personnel funded by third parties
[3] English track available

English-taught Master Programs

Duration: 4 semesters; full-time programs; 120 ECTS credits; degree awarded: MSc (WU),
except for International Management/CEMS and Strategy, Innovation, and Management Control
(see program details below)

GENERAL ADMISSION REQUIREMENTS
Relevant bachelor degree; proof of sufficient proficiency in English; proof of achievement potential (valid GMAT results). More information: **wu.ac.at/prospective/en**

APPLICATION PERIODS
WU employs a rolling admissions policy, allowing students to apply from the beginning of September until spring. Rolling admission for the academic year 2016/17 starts in September 2015 with the following three priority deadlines: beginning of October; beginning of January and beginning of March (March ist not applicable for International Management/CEMS).

PROGRAM DETAILS
Information Systems
› Focus on IT-related knowledge with a particular emphasis on management and research topics
› Students acquire skills ranging from system analysis to system implementation
› Based on state-of-the-art research

International Management/CEMS
› Joint program: MSc (WU) and CEMS MIM degrees
› Focus on international strategy and cross-cultural management
› Internship abroad, business project and exchange semester

Marketing
› Focus on customer-oriented management concepts, marketing research and decision tools
› Qualifications for marketing specialist/executive positions, academic careers & advanced management consulting with a wide choice of marketing electives

Quantitative Finance
› Focus on building strong quantitative skills coupled with a solid knowledge base of the underlying theory of finance
› Students can choose between an Industry Track or a Science Track
› Strong networks and links to the finance industry

Socio-Ecological Economics and Policy
› Focus on socioeconomic analysis of sustainability issues
› Students choose two of four concentration areas in the fields of Environment, Population, Multi-Level Policy, and Social Policy

Strategy, Innovation, and Management Control
› Optional double degree in cooperation with selected partner schools
› Focus on all major aspects of organizational leadership, as well as corporate development and strategic management
› Case studies, business projects and exchange semester

Supply Chain Management
› Focus on design and analysis of supply chains for focal companies
› Management and coordination of global supply chains
› Learn to measure, evaluate and control the quality of supply chain processes
› Discussions of recent issues in SCM with experts from the industry

For further details visit: **wu.ac.at/master/en**

WU International

WU is a truly international university, because it recognized the necessity of thinking beyond Austria's borders early on and has made internationalization a number one priority.

CONFIRMED QUALITY

WU's international students can be sure they are studying at a leading European university. WU's high standards in research and teaching are confirmed by the international and prestigious EQUIS accreditation – a seal of quality that has been awarded to about only 152 universities worldwide (www.efmd.org).

WU is also a member of respected associations like CEMS (Global Alliance in Management Education), an alliance of 29 top business schools and over 70 of the world's leading multinational companies (www.cems.org), and PIM (Partnership in International Management), a network of 60 highly-renowned business schools and universities around the globe (www.pimnetwork.org).

RANKINGS

International ratings like the Financial Times Ranking have repeatedly positioned WU and its programs among the top universities in its field, and document WU's continuous progress each year:

STUDY AROUND THE GLOBE

WU has successfully integrated many international aspects in its research and teaching over the past few years. With around 230 partner universities all over the world, WU maintains a strong international network. Today WU is involved in numerous externally-funded international research projects and has increased the number of its faculty members with international backgrounds, especially over the last few years.

INTERNATIONAL STUDENTS

As a result of these efforts, WU has a very high percentage of international students: Today, more than one out of every four WU students comes from outside of Austria (not including exchange students), and this number is growing from year to year. Currently, most of WU's international students are from Germany, France, Canada, China, Russia, and the USA.

Living in Vienna

Vienna is consistently ranked the city with the world's highest quality of living according to Mercer's Quality of Living Survey.

HOUSING/ACCOMMODATION

WU has no on-campus dormitories or housing services. Still, accommodation can easily be found through the following channels or through newspapers/online ads:

› **stuwo.at** – nonprofit student housing organization
› **milestone.net** – high-quality living next to the WU
› **wihast.at/index.en.html** – Wihast Dormitories
› **housing.oead.ac.at/index_e.asp** – OeAD Housing Office next to the campus
› **jobwohnen.at** – list of available apartments to share provided by Austrian Students' Union

WORKING IN VIENNA

WU's ZBP Career Center is the first place to go with any questions regarding working in Austria (**zbp.at**)

› Job openings for students, graduates and young professionals
› Contacts to over 500 national and international companies
› Approx. 1,500 job vacancies/year

LIVING COSTS Life in Vienna is quite affordable, especially for a capital city
Accommodation approx. € 300 – 450 per month
Health insurance approx. € 50 per month
Essentials (food, personal expenses) approx. € 300 per month
Public transport approx. € 150 per semester
Books approx. € 75 – 150 per semester

University of the Future

Internationalism, innovation, diversity – the new Campus WU is the concrete realization of WU's vision for a modern university. The fundamental principles of the new architecture reflect the values and ideas we cherish at WU.
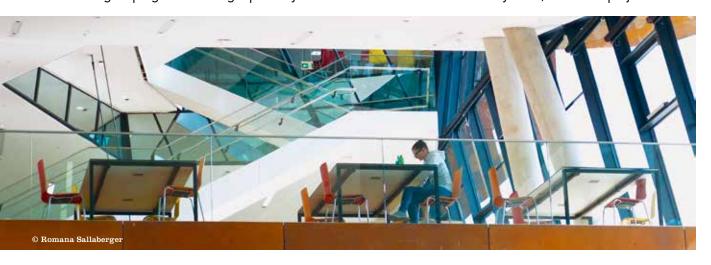
As a public institution, WU has lived up to its responsibility of building its new campus in an economical, ecological, and socially sustainable manner. WU's decision to locate the new campus in Vienna's second district has redefined this area and transformed it into an educational hub. We have not only constructed new buildings, but in the process we have also given concrete realization to our ideas of what the university of the future should look like. The new campus is more than just a place for academic research and teaching and learning practical skills; it is also designed to create a new space for social, cultural, and political life.

The imposing Library & Learning Center (LC), designed by the Iraqi-British architect Zaha Hadid, is a testament to the central importance of research and teaching at WU. The Library & Learning Center is surrounded by five building complexes, including the Teaching Center, which houses most of WU's auditoriums. The Teaching Center is intended mainly for bachelor degree students, while the master degree programs are taught primarily in the individual Department buildings. The Executive Academy building is the home of continuing education and life-long learning programs. In this way, the various buildings and their functions reflect the three tiers of teaching and learning represented by the Bologna Process.

WU's Department-based organizational structure was also a contributing factor. In the past, the various Institutes that make up the Departments were scattered across different locations. Now they have been brought together in four Department buildings, making life much easier for both students and faculty.

These are not the only improvements the new campus has to offer: All rooms have natural light, and the auditoriums feature state-of-the-art teaching equipment, including digital whiteboards. There are 3,000 student workplaces, three times as many as in the old buildings in Vienna's ninth district. These workplaces are located not only in the dedicated self-study areas, but also in project rooms

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that can be booked by teaching staff and students alike. They cater to different needs by providing quiet spots for focused academic work as well as opportunities for work on group projects in communication-friendly study areas.

The top priority in planning the new campus was to create an environment for WU students and staff that encourages productive work and communication.

Not only the buildings themselves, but also the surrounding grounds offer plenty of opportunities for communication and meeting people. 55,000 m² of Campus WU's total surface area of 90,000 m² is open, publicly accessible space. Fences or barriers would contradict our vision of an open campus.

Visitors and area residents are more than welcome at Campus WU. The campus offers not only food for thought, but also restaurants, cafés, and shops, all in a stimulating architectural environment.

As different as they may look, the buildings are all based on the same overall technical concept: the buildings' infrastructures are standardized in terms of construction, energy supply, ventilation, and sanitary facilities. The entire campus has been designed in accordance with "green building" principles. Much of the required energy is obtained using geothermal energy from groundwater.

Another key feature of Campus WU is barrier-free accessibility. All auditoriums are specially equipped for people with disabilities, all areas are designed to be wheelchair accessible, and the campus also features a tactile guidance system for the visually impaired.

We have not only made sure to comply with all relevant legal guidelines, but we have also drawn on experience gained from best practice examples. WU aims to play a pioneering role – in all respects.

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