



YOUR FUTURE STARTS HERE

GET READY FOR YOUR FUTURE — IT STARTS RIGHT HERE.

Located in northern Germany, Jacobs University is one of the country's most international universities, characterized by a truly intercultural and close-knit community of students and faculty. Founded in 2001 as a private English-speaking university, Jacobs attracts highly talented and open-minded students from all over the world, with more than 1,200 students from 100 countries currently living on its residential campus. The university's reputation speaks for itself, with consistently high rankings achieved in Germany's widely respected Centre for Higher Education (CHE) over the last decade.

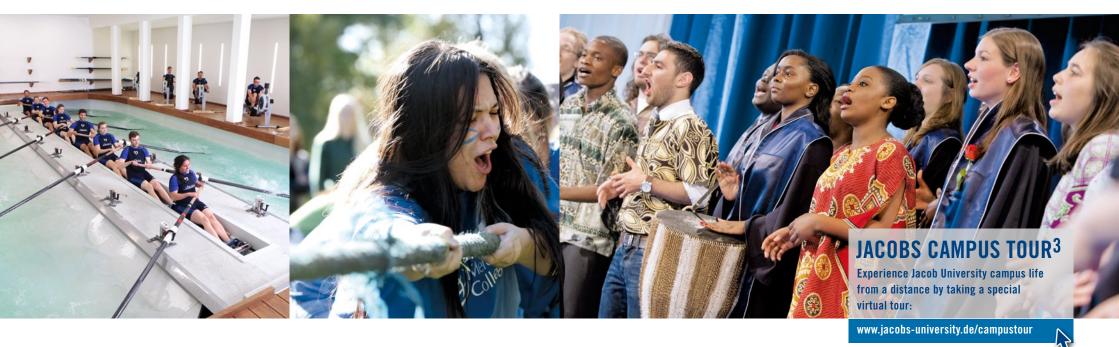
A transdisciplinary approach is one of the core elements of a Jacobs University education. Study modules cover various aspects of academic fields, reflecting the complex nature of interconnected topics and global challenges. Students are introduced to numerous methodologies and are encouraged to apply a problem-based approach and a global perspective to their work.

Instructors support student learning by sharing the latest findings in their academic fields and by responding to students' particular needs through personalized academic advising. The University's research-oriented approach engages students in the research process at an early stage while providing them access to modern lab facilities and state-of-the-art technology.

AT A GLANCE

- ◆ Earn an internationally recognized degree at one of Germany's top private English-speaking universities
- ◆ Choose from study programs in a broad range of in-demand fields
- ◆ Engage in transdisciplinary research from the very first semester and throughout your studies
- Benefit from small class sizes and close interaction with faculty members and fellow students
- **◆** Experience campus life together with 1,200 students from 100 countries

CAMPUS LIFE



Jacobs University unites living and learning, enabling students to discover and explore their talents beyond the classroom. There are over 100 student-driven social and cultural clubs on campus, providing an abundance of activities and events for students to choose from. Academic life is further enhanced by various campus facilities including a fitness center, an indoor rowing tank, an interfaith house and a theater space.

There are four separate residence halls consisting of two-bedroom apartments with shared bathroom facilities. Each residence hall has its own personality and sense of community, which nurtures close connections and camaraderie among students.



HOST FAMILY PROGRAM

Jacobs University's Host Family Program also helps international students feel at home. Every new student has the opportunity to sign up for this unique program and be paired with a host family who provide support in adapting to the culture and life in Bremen.



STUDYING AT JACOBS UNIVERSITY

Jacobs University offers a broad spectrum of attractive study programs ranging from the natural sciences, mathematics and engineering to the social sciences and economics. The teaching portfolio is based on programs related to the three focus areas at Jacobs University:

MOBILITY - OF PEOPLE, GOODS AND INFORMATION

Understanding the worldwide flow of people, goods and information is important in today's globalized world. Information influences the life of the individual and the cohesion of societies and cultures in many different ways. Expertise in different disciplines, such as computer science, communication technology, logistics, mathematics and psychology are brought together in the development of new solutions.

HEALTH – FOCUS ON BIOACTIVE SUBSTANCES

Designing solutions for a healthier world has always been one of the great challenges of science. The goal is to make a healthy life possible for each human being and for the growing world population as a whole. Food, plants and marine algae can have a positive effect on health similar to that of conventional medicine. However, scientists first have to identify and isolate bioactive substances and explore their safe application through transdisciplinary cooperation between geo science, life sciences, physics and chemistry.

DIVERSITY - IN MODERN SOCIETIES

When considering the development of our modern global society, individuals are regarded as indivisible biological, psychological and socially determined beings. This area includes topics such as social cohesion, state systems, the preservation of social welfare or the effects of regulatory systems on the individual, such as their impact on human rights. Diversity is thus regarded as a driving force behind development and progress.

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PRE-DEGREE PROGRAMS

ACHIEVE YOUR FULL POTENTIAL

studies is a challenging endeavor. Jacobs University has designed two pre-degree programs that provide students with the opportunity to boost their academic learning skills and to explore various fields of study before pursuing a university degree. Each program addresses a student's specific needs: for the aspiring engineer who strives to improve their math skills; for the future medical student who needs support in finding a study place in medicine; or for the student still in search of the ideal major. Students choose from various preparatory, orientation and career modules to design an individual study plan that enables them to grow personally and academically.

Study Program at Jacobs University

Academic advisors and experienced instructors provide professional guidance in the transition to undergraduate studies. Students benefit from small class sizes, individualized support, and state-of-the-art facilities, while gaining their first practical experience in a lab environment.

A PERSONALIZED APPROACH

Planning and preparing for university

Five Reasons to Enroll in a Pre-Degree

A PREMIUM EDUCATION

Students are able to select study modules according to their own needs and attend classes from those fields of study that interest them most. Students receive personal career counseling and benefit from a customized academic and professional skills workshop program.

ADMISSION TO JACOBS UNIVERSITY

Students who successfully complete one of Jacobs University's pre-degree programs are guaranteed admission to the university's renowned undergraduate programs. Those intending to continue their education at a medical school or university abroad will receive personal counseling and professional guidance during the application process.

- CERTIFIED KNOWLEDGE

Our certified programs enable students to collect up to 45 ECTS credit points, which can be transferred to future university programs.

CAMPUS LIFE

Students enrolled in a pre-degree program live and learn on campus. They become part of a vibrant international community and establish networks for a lifetime.



AT A GLANCE

- Sharpen your academic skills and explore different fields of study
- Perfect your academic English and improve your math and science skills
- Prepare for university entrance examinations (SAT, TMS, HAM-Nat, MedAT)
- **⊕** Earn ECTS credits which are transferable to future undergraduate studies

FOUNDATION YEAR

PROGRAM OVERVIEW

Jacobs University's Foundation Year Program allows students to explore different fields of study and equips them with academic learning skills before they embark on a degree. The program, which runs for two semesters, is tailored to students' individual academic interests and offers orientation possibilities in engineering, computer science, the natural sciences, social sciences, economics and management.

Students are introduced to scientific methods and can take preparatory courses in English, mathematics, science and technology based on their own preferences. Foundation Year students may also enroll in regular undergraduate classes and earn transferable ECTS credits that can be used towards the completion of a degree at Jacobs, or at another recognized university. The program fosters academic, social and intercultural skills in students, and equips them with the academic prerequisites for pursuing successful careers in a wide range of fields.

The program is taught in English.

SHORT INFO

- Get ready for university, sharpen your academic skills and explore different fields of study
- Spend a year on a campus in Germany which is home to students from 100 countries
- Perfect your academic English, improve your math and science skills and prepare for the SAT
- Choose between orientation opportunities in economics and management, social sciences and history, natural and life sciences, and engineering and computer sciences
- Earn transferable ECTS credits

For more information, see:

www.jacobs-university.de/foundation-year or contact us:

Email: foundationyear@jacobs-university.de Phone: +49 421 200-4313

MEDICAL PREPARATORY YEAR (BILINGUAL)

PROGRAM OVERVIEW

The Medical Preparatory (MedPrep) Year is designed for students with a passion for medicine and who have their sights set on pursuing a medical degree. Students acquire fundamental knowledge in medical studies and natural sciences, gain hands-on experience in laboratory courses and medical internships, and improve their prospects for getting into medical school.

The two-semester pre-degree program is taught in both English and German. It provides a professional qualification timeline for gaining admission to medical schools in Germany and other attractive study locations in Europe. The program also facilitates being admitted to other health care-related programs of study, such as Clinical Psychology or Public Health. The curriculum includes individual application training as well as entrance exam preparation for formats such as TMS, HamNAT and MedAT. International admission testing for the SAT is also included.

MedPrep students are able to take full advantage of the many learning opportunities inside and outside the classroom. They will attend challenging undergraduate classes in the natural sciences, participate in professional skills courses covering topics such as medical ethics, patient consultation and academic learning, and sharpen their intercultural skills.

SHORT INFO

Central elements of the study program include:

- MEDICAL NATURAL SCIENCES: Students further their insight into biology, chemistry, physics and mathematics and acquire fundamental knowledge in physiology and anatomy, while earning up to 45 transferable ECTS credits in university-level courses.
- PRACTICAL EXPERIENCE: Hands-on experience is gained through a hospital internship and courses led by qualified physicians.
- TEST PREPARATION: Students are counseled in preparation for university entrance examinations (TMS, HAM-Nat, MedAT, SAT).
- PROFESSIONAL ORIENTATION AND
 CAREER COUNSELLING: Students are individually guided in the transition to medical studies in Germany or other European countries.
- ENGLISH-LANGUAGE SKILLS: Students have the opportunity to refine their academic English and knowledge of medical terminology.

For more information, see:

www.jacobs-university.de/medprep or contact us:

Email: medprep@jacobs-university.de Phone: +49 421 200-4301



UNDER-GRADUATE PROGRAMS

PURSUE YOUR CALLING

STUDY PROGRAM STRUCTURE

An undergraduate degree program at Jacobs University equips students with the necessary qualifications for a successful academic and professional career. Our programs' modularized 3C structure allows students to choose from several course electives, in effect tailoring their degree to best suit their interests. Running parallel to all of our three-year bachelor programs is the unique **Jacobs Track**. This provides students with a broad range of tailor-made courses designed to foster career competencies. These include courses that promote communication, technology, business, (German) language, and management skills. The World Track, offered in the fifth semester, provides students with the opportunity to complete an extended internship or to study abroad. Thus, students are able to get on-the-job training or gain additional intercultural experience. Alternatively, students can opt for the Campus **Track**, which allows them to stay on campus and complete further specialization courses.

All undergraduate programs offer students a flexible and broad choice of core curriculum and electives to help them fulfill their academic goals.





Declare your major after your first year of studies

- Study abroad or complete an internship as part of our integrated
 World Track
- Take advantage of the Jacobs Track, which includes valuable language, methods and skills modules

THE 3C PROGRAM STRUCTURE

Jacobs University's study programs are based on European Higher Education Area regulations. All study programs adhere to the European Credit Transfer System (ECTS), which facilitates credit transfer between academic institutions. The three-year undergraduate program involves six semesters of study with a total of 180 ECTS credits. The curricular structure follows an innovative, and student-centered module scheme – the 3C Model – which groups the curriculum into three overarching themes:

YEAR 1 — CHOICE

As part of the first year, students select three CHOICE modules from the various degree programs offered. The combination of CHOICE modules is flexible and allows students to decide on their major after the first year of study.

YEAR 2 - CORE

Students take three in-depth, disciplinespecific CORE modules in their second year of study. One of these three modules can also be replaced by a CORE module from a different discipline, which allows students to incorporate a minor study track into their undergraduate education.

YEAR 3 — CAREER

The World Track, which is offered in the fifth semester, provides students with either an extended internship or an opportunity to study abroad at a partner university. Students may also opt to remain at Jacobs to continue their undergraduate education. In addition, students choose specialization courses within their study program and pursue a project/research module that includes their Bachelor Thesis.



THE JACOBS TRACK

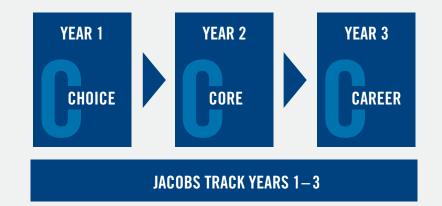
An integral part of all study programs, the Jacobs Track runs parallel to the disciplinary **CHOICE – CORE – CAREER** modules. It is a requirement for all students to take modules offered within this Track, because they foster employability as well as a transdiciplinary and international outlook.

The Transdisciplinary Triangle module transcends the boundaries of traditional disciplines by offering courses in business, technology and societal contexts.

Mathematics and statistics courses are offered within the Methods module, providing students with the general foundations and methods that are relevant for their studies.

Foreign languages are taught as part of the Language module, with an emphasis on German language skills for international students, in order to support their successful integration into a new culture.

The Skills module equips students with academic and professional knowledge, including self-management, job application, presentation and writing skills.



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BIOCHEMISTRY AND CELL BIOLOGY (BSc)

"I can't thank the BCCB faculty enough for the great preparation in my scientific career! I am currently in a molecular and cell biology PhD program and all of my professors have been thoroughly impressed with my background and experience; I have twice been asked to bring more students from Jacobs here." GENO VILLAFANO, UNITED STATES

PROGRAM OVERVIEW

Biochemistry is the study of molecules and chemical processes in living organisms, while Cell Biology covers the structure and physiology of cells, their components and the interactions with their environment. The two fields are combined in one comprehensive degree program to give students a broad understanding of the molecular and cellular mechanisms that form the basis of life. Students not only become familiar with the theoretical background of these core areas, but are also involved in hands-on research right from the start of their studies.

CAREER OPTIONS

BCCB graduates have joined international companies in the pharmaceutical, biochemical and biomedical industries. They hold positions as toxicologists, forensic scientists, consultants operating in the public sector, and as university lecturers or professors. After graduating, BCCB students have also been admitted to excellent universities world-wide for graduate studies (MSc or PhD) such as the Universities of Oxford and Cambridge, Harvard University, ETH Zurich, European Molecular Laboratories (EMBL) and International Max-Planck Research Schools (IMPRS).

YEAR 1 — CHOICE

- Biochemistry and Molecular Biology
- Cell Biology

YEAR 2 — CORE

- Biomedicine
- Infection and Immunity
- Molecular Biology

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Methods and Research Strategies in BCCB Part I (Methods) / Part II (Strategies)
- Structure and Function of Proteases
- Implications for Pharmacological Interventions in Translational Approaches
- Microbial Pathogenicity I/II
- Current Topics in the Molecular Life Sciences I/II
- Cellular Biochemistry
- Ribogenetics

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CHEMISTRY (BSc)

HEALTH

"Germany for me is the country of chemistry, and therefore the great companies and brands that involve chemistry like pharmaceutical products, cosmetics and chemical equipment are all German. So, why not study chemistry where it's most advanced?"

ELIAS HALABI. VENEZUELA

PROGRAM OVERVIEW

Chemistry relates to nearly every aspect of our lives. It lies at the heart of some of the world's most advanced industries, for example those focusing on pharmaceuticals, sustainable energy development and even the food and beverage industry. The transdisciplinary bachelor degree in Chemistry offers modules that include courses in organic, inorganic, analytical and physical chemistry, as well as chemical biotechnology. Students are also taught the relevant aspects of mathematics, engineering and industrial priorities. Over the course of the three-year study program you will take extensive laboratory courses and carry out research projects independently during your third year of study. Undergraduate students are also strongly encouraged to engage in research projects with graduate students as early as their first or second semester.

CAREER OPTIONS

Chemistry graduates undertake careers in the areas of pharmaceuticals, nanotechnology, materials and energy in environmental monitoring and in forensic science. Most students continue their education with a Master of Science or enter medical school. This leads on to careers not just as chemists but in industry and beyond, for example as production managers, business consultants, medical doctors, patent attorneys, marketers and even as politicians.

YEAR 1 — CHOICE

- Organic Chemistry
- Inorganic Chemistry and Environmental Systems

YEAR 2 — CORE

- Physical and Analytical Chemistry
- Inorganic and Supramolecular Chemistry
- Chemical Biotechnology

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Bioorganic Chemistry
- Organometallic Chemistry
- Supramolecular Chemistry
- Structure and Mechanism
- Organocatalysis
- Advanced Organic Synthesis
- Biotechnology: from Science to Business
- Clinical Diagnosis and Management by Laboratory Methods
- Medicinal Chemistry
- Biophysical Chemistry
- Structural Methods in Nanoscale Science

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COMPUTER SCIENCE (BSc)



"I chose Jacobs University because it is international but small at the same time. It is easy to get in touch with the professors here.

I meet with my academic advisor once a week, and I very much appreciate the help and support I get from him."

HE XU, CHINA

PROGRAM OVERVIEW

Computer Science lies at the core of all modern industries, as computer systems and information technology are the basis for almost all of today's production processes. Computer technology changes constantly but there are a number of fundamental principles underlying these technologies. The Computer Science program at Jacobs University focuses on understanding these principles and their application in practice. In addition to courses dealing with core competencies (programming, software engineering and foundations of computer science), students will take courses in mathematics (calculus, linear algebra and statistics) and engineering and sciences, while also carrying out guided research.

CAREER OPTIONS

The job market for computer scientists has been very good in the last few years, and there is no indication that this will change soon. Graduates can consider careers in a wide range of industries such as Internet and mobile technology, software and classic IT consultancy services, as a games developer, multimedia programmer, computer graphics designer, software engineer or systems analyst. Graduates have started successful careers in both academia and with global industrial players such as Google, Microsoft and Facebook.

YEAR 1 — CHOICE

General Computer Science

YEAR 2 — CORE

- Applied Computer Science
- Technical Computer Science
- Theoretical Computer Science

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Machine Perception
- Machine Learning
- Computational Logic
- Robotics Automation
- Planning and Optimization
- Visualization Image Processing
- Information Architectures
- Cloud Computing

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EARTH AND ENVIRONMENTAL SCIENCES (BSc)



"I can say that there is no other university that I would have preferred to have studied at. Jacobs is a fantastic project – a real gateway to the world."

SEINAB BOHSUNG, GERMANY

PROGRAM OVERVIEW

The Earth and Environmental Sciences (EES) program is an interdisciplinary science major which provides a holistic understanding of the natural functioning of planet Earth and the consequences of human impact. The program is ranked as Germany's No. 1 Geoscience BSc program. Based on a sound introduction to fundamental chemistry and physics, it combines disciplines such as geology, geochemistry, geophysics and oceanography with environmental sciences and social sciences (optional). EES prepares students for topical challenges and research questions such as the management and sustainable exploration of natural resources (including freshwater) and the study of the Earth's climate and oceans. Participation in excursions and laboratory work as well as teamwork in multidisciplinary and multicultural groups are an important part of the studies. Students may participate in ongoing research projects as early as the second semester.

CAREER OPTIONS

EES graduates have a broad range of career opportunities in the private sector, with government institutions and non-governmental organizations that focus on the environment, resources, development or energy. Graduates can also pursue academic careers in the areas of geosciences, ocean sciences, environmental sciences and resource exploration.

YEAR 1 — CHOICE

- Inorganic Chemistry &
 Earth and Environmental Systems
- Physics of Natural Systems

YEAR 2 — CORE

- Fundamental Earth and Environmental Sciences
- Earth, Ocean and Environmental Geochemistry
- Earth, Ocean and Environmental Geophysics

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- 7- to 12-day Ocean and Field Labs in Europe
- Advanced Marine Environmental Science
- Monitoring and Analysis of Earth Systems
- EES Seminar on Current Topics in Earth and Environmental Science
- Sustainability
- Risk Management
- Astrobiology
- Water The Scarce but Precious Resource

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ELECTRICAL AND COMPUTER ENGINEERING (BSc)

"Smaller classes and the interactive teaching style keep students focused throughout the lecture. We have tutorials, which help a lot to go into depth if for some reason there was not enough time in class." NAZIA SARAH ISLAM, BANGLADESH

PROGRAM OVERVIEW

The extensive developments in microelectronics over recent decades have triggered a digital revolution with computers as the driving force. While we still think of a computer as a desktop or a laptop, digital computing and digital signal processing have become vital for many of the products in our everyday lives, such as cars, mobile phones, tablets, cameras and household appliances. The Electrical and Computer Engineering program focuses on the areas of communications and digital signal processing, including the enabling of digital processing elements and their programming.

CAREER OPTIONS

Electrical and Computer Engineering graduates start their careers in very diverse companies, successfully continue at old renowned universities or stay with Jacobs University for graduate education. Potential career fields include the aerospace industry, telecommunications, the automotive and energy sector, and in the field of information technology, and in academia, management and consultancy.

YEAR 1 — CHOICE

■ Introduction to Electrical Engineering

YEAR 2 — CORE

- Communications
- Electronics and Noise
- Signal Processing

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Advanced Random Processes
- Multi-User Wireless Communications
- Digital Communications with a Focus on Wireline
- Channel Coding
- Speech Signal Processing
- Detection and Estimation
- Model Order Reduction
- Embedded Systems Design Lab
- Advanced Digital Design

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GLOBAL ECONOMICS AND MANAGEMENT (BA)



"A degree from Jacobs University opens doors to many different opportunities and really prepares us well for our future. The fact that I am studying in English was also important to me, because I can choose to go to any English-speaking institution in the world." JESSICA GEIGER, GERMANY

PROGRAM OVERVIEW

A multitude of political, social and cultural forces drive economic decisions in our globalized world. To understand these forces, students need to learn about the many challenges facing today's companies and economies. These include resource depletion, financial crises, ethical questions and social exclusion. The Global Economics and Management program explores the classical studies of business administration and economics within a global context, and combines them with knowledge from fields such as political science, psychology, communication or engineering - depending on the specializations and minors the students choose. The program teaches a transdisciplinary understanding of global economic challenges with an emphasis on sustainable development and responsible leadership.

CAREER OPTIONS

Completion of a BA in Global Economics and Management allows graduates to seek employment in the private sector, government, international organizations, business associations, the media, diplomatic services and consulting.

YEAR 1 — CHOICE

- General Economics
- General Management

YEAR 2 — CORE

- Economic Policy Challenges
- Economic Institutions and Organization
- Managing Diversity

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Public Finance in Times of Crisis
- Economic Cycles and Crises
- Global Catastrophes and International Risk Management
- Big Data for Business and Economics
- Energy and Environmental Policies
- Sustainable Management Policy
- International Organizations
- International Political Economy
- Global Communication

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INDUSTRIAL ENGINEERING AND MANAGEMENT (BSc)

"Due to the transdisciplinarity of the program, the knowledge gained can be applied in production, consulting, humanitarian aid, etc. The advantage was learning directly from the leaders in the industry, who created an environment which was always challenging us to aspire for more and better!"

ELENA ISAC. MOLDOVA

PROGRAM OVERVIEW

Industrial Engineering is one of the most versatile and flexible branches of engineering. It has been said that engineers make things, whereas industrial engineers make things better. The Industrial Engineering and Management (IEM) program deals with both the creation and the management of systems that integrate people, materials and energy in productive ways. It covers topics such as process engineering, operations research, supply chain management, engineering design, logistics and project management. Students are equipped with the essentials of both the management and the engineering business functions and are thus prepared for successful careers in industry.

CAREER OPTIONS

IEM prepares graduates for a career at the interface between the management and engineering business divisions. This can be the start of a career in industrial and trade enterprises from different industries, as well as in research and education. The career paths that open up for graduates range from specializations in production and logistics areas through project management careers to strategic and corporate management. Close cooperation and contacts are established with companies such as Airbus, Daimler, Porsche, Mondelez, ArcelorMittal, Barry Callebaut, Deutsche Bahn, KPMG and more.

YEAR 1 — CHOICE

 General Industrial Engineering and Management

YEAR 2 — CORE

- Production and Engineering
- Process Engineering
- Finance and Project Management

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Modeling Dynamics in Industrial Systems
- Business Law
- Procurement Logistics
- Distribution Logistics
- Contract Logistics
- Traffic, Transport and Storage Systems

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Production and Logistics
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INTEGRATED SOCIAL SCIENCES (BA)

"Instructors in ISS not only taught me extensive research skills, but they also instilled a passion to look beyond disciplinary boundaries. The problem-solving approach in ISS has also led me to work with partners outside of academia."

JAN EICHHORN, GERMANY

PROGRAM OVERVIEW

The Integrated Social Sciences (ISS) program provides a unique integrated approach to the social sciences, including four disciplines and their interfaces: media/communication science. political science, sociology and economics. They focus on highly relevant and very recent issues, topics and problems that need to be solved. The range of problems addressed is broad and includes war and conflict, environmental concerns and the role of the state. A particular feature is the intensive methods training - both quantitative and qualitative approaches are taught in advanced methods labs which are integrated into the program structure. Students train in the analysis of pressing problems, as well as developing potential solutions. The program is research-based and familiarizes students with the development of empirical research questions and research designs.

CAREER OPTIONS

Graduates will be in an excellent position to pursue careers in governmental and non-governmental organizations, public administration, international organizations, private and public media, as well as in private-sector enterprise with strategic planning and public relations components. Alumni have been very successful in securing funded graduate positions at prestigious universities such as Oxford, Harvard, Columbia University and MIT.

YEAR 1 — CHOICE

- Political, Social and Media Diversity
- General Economics

YEAR 2 — CORE

- International Politics and Policy
- Communication, Culture and Prosumption
- The Good Society

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Social Movements
- Civic Networks and Social Capital
- Diversity and Multiculturalism
- Postindustrial Societies
- Global Communication
- Political Campaign Communication
- Visual Methods in the Social Sciences.
- Media and Socio-Political Uprisings

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FINANCIAL SUPPORT

Students applying for regular bachelor programs at Jacobs University can also choose to apply for financial support. Working alongside of our Admissions Team is a dedicated Financial Services Team, who will guide you through the process. Individualized financial support packages, which may include grants, scholarships, and/or tuition postponements, help make it possible for students to study at our university. Repayment plans are shaped towards one's personal situation following graduation, taking graduate students and placements into account.

For more information, see: www.jacobs-university.de/financialaidapplication

INTELLIGENT MOBILE SYSTEMS (BSc)

"I chose Jacobs University because of its flexible course selection policy. Although IMS is similar to mechatronics programs available in other universities, it is unique due to its emphasis on intelligence and autonomy of mobile systems."

PROGRAM OVERVIEW

RUI CAO. CHINA

This program covers engineering methods and technologies relevant in making artificial mobile systems independent of permanent human supervision, i.e. that enable mobile systems to carry out autonomous intelligent operations. Study areas include the automotive and transportation industries, robotics and automation, communication technologies, marine technology and logistics. Hands-on experience with technical systems and methods in state-of-the art labs are part of the program.

CAREER OPTIONS

Graduates pursue careers in research and development, or management tracks in automotive and transportation, robotics and automation, communication technologies, marine technology and logistics industries. Given the increasing need for the automation of daily tasks using intelligent mobile systems, there are a significant number of career options in addition to the core options covered in the program.

YEAR 1 — CHOICE

Introduction to Intelligent Mobile Systems

YEAR 2 — CORE

- Intelligent Systems
- Automation and Control
- Planning and Optimization

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Advanced Control
- Digital Signal Processing
- Wireless Localization
- Computer Networks

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www.jacobs-university.de/imsys

INTERNATIONAL BUSINESS ADMINISTRATION (BA)

"Classes at Jacobs are very transdisciplinary and diverse. It's interesting to see how the students all have different perspectives on the subject and approaches to learning."

PATIENCE VIMBAYI MUSHAMIRI. ZIMBABWE

PROGRAM OVERVIEW

The International Business Administration program covers all the essential areas of business and management with an international outlook. Students will develop strategic and practical perspectives on value creation in a globalized, culturally diverse and technology-driven world. Topics that are emphasized include the management of international firms, the integration of information technology in all business areas, and the influence of the economic and cultural context on business activities. The program teaches an informed, comparative and critical understanding of common business practices, problems and values in a diverse and international context. Students will develop the analytical and social skills required to succeed as effective and responsible managers.

CAREER OPTIONS

Graduates pursue careers in a broad range of businesses, especially international and internationalizing firms with a focus on future-oriented industries, e.g. renewable energy, health, information technology, automotive and aerospace industries.

YEAR 1 — CHOICE

- General Management
- General Economics

YEAR 2 — CORE

- Strategy and Management
- Finance and Project Management
- Managing Diversity

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Demographic Change Management
- Implicit Leader Development
- Personnel Training the Cognitive Behavioral Wav
- Diversity Management
- Cross-Cultural Communication
- Design Thinking Innovation Management
- Social and Mobile Media International Business Models
- China and International Business
- Managing Alliances and Networks
- Trust Within and Between Organizations

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"I chose International Politics and History because I am really interested in both disciplines, and I think it's going to give me good background knowledge to go into a career related to law or mediation. I find the issues of human rights and mediation particularly interesting." SAVANNAH CARR-WILSON, CANADA

PROGRAM OVERVIEW

The program International Relations: Politics and History offers an analytical approach to past and current international problems. It introduces students to the evolution of international politics, international economics and domestic political systems. Students gain knowledge of international law, diplomacy, governance, globalization processes, security issues and intercultural exchange. They acquire a critical understanding of present issues, and learn about the political and social developments that have shaped today's world over the past two centuries.

CAREER OPTIONS

By acquiring an in-depth understanding of international relations and history from both an empirical and theoretical perspective, students gain the knowledge and the analytical tools needed in fields such as politics and diplomacy, private-sector management, public administration, governmental organizations and non-governmental organizations. They also acquire the skills to continue in graduate and postgraduate research. IRPH has an excellent track record of placing students in top graduate schools.

YEAR 1 — CHOICE

Introduction to International Relations

YEAR 2 — CORE

- International Politics and Policy
- Global Dynamics in Historical Perspective
- Arenas of Political Life

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Global Ideologies
- Religion and Politics
- The Making of the Modern State
- History of Social and Political Theory
- Political Theory and Social Neuroscience
- The Global East and South
- Transnational Political Movements
- International Environmental and Energy Governance
- Cold War History and Historiography

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MATHEMATICS (BSc)



UNDERGRADUATE PROGRAMS

"The Mathematics major at Jacobs allows you to choose courses which are suitable for you individually. Students are optimally supported in challenging courses with small classes and close collaboration with professors."

MARVIN SECKER, GERMANY

PROGRAM OVERVIEW

Mathematics as a fundamental science ranges from algebra, analysis, geometry and topology to applications of immediate practical importance, for example modeling fluids using partial differential equations. Mathematics often finds intriguing practical applications in surprising areas: number theory is used in cryptography, dynamic systems and wavelets are successfully employed in engineering, and mathematical game theory was the basis for research in economics that has been awarded a Nobel Prize.

The Bachelor of Mathematics program at Jacobs University offers a strong foundation in pure mathematics and flexible study options to combine the study of mathematics with solid training in one or more fields of application. Math students participate in research groups together with graduate students and faculty, and many have even written research articles. One key element in our education is that we do not just teach courses to students, but accompany them as individuals throughout their education.

CAREER OPTIONS

There are few undergraduate degrees which rival mathematics in the diversity of rewarding job options, including careers in research, finance, banking, management, biomedical technology, IT, engineering and consulting.

YEAR 1 — CHOICE

Fundamental Mathematics

YEAR 2 — CORE

- Core Mathematics
- Core Pure Mathematics
- Core Applied Mathematics

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Algebra
- Geometry
- Topology
- Number Theory
- Stochastic Processes and Finance
- Discrete Mathematics
- Functional Analysis
- Numerical Analysis
- Differential Equations and Dynamical Systems

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MEDICINAL CHEMISTRY AND CHEMICAL BIOLOGY (BSc)

"The faculty not only instilled in us a passion for science, but also guided us through the beginning of our professional lives. After only one year, I was accepted to an internship at an Ivy League university – I realized then how well the program prepares us for work in world-class research facilities." IDSEPH MCINNES, UNITED STATES

PROGRAM OVERVIEW

Human life expectancy and quality of life has dramatically increased over the last hundred vears and this is directly connected to the rise of modern medicine. The Medicinal Chemistry and Chemical Biology (MCCB) program places the student at the forefront of the revolutionary efforts now underway to understand and treat disease. The program provides a fundamental understanding of the drug-body interaction from the molecular to the macromolecular level, thus enabling identification and exploitation of bioactive molecules. The topics covered range from drug discovery, molecular docking and drug delivery and resistance to the intricacies of refining our knowledge of drug target and function within molecular biology. This program is based on an innovative, multidisciplinary approach which encompasses life scientists, chemists, biophysicists and biotechnologists. MCCB is a new major predominantly taught by faculty from our top CHE-ranked Chemistry, and Biochemistry & Cell Biology BSc programs.

CAREER OPTIONS

MCCB graduates have a wide variety of career choices. Naturally in pharmaceutical companies, but also in the pharmaceutical, chemical and biotechnology industries, analytical food testing laboratories, quality management, academic careers, regulatory affairs or even as patent attorneys.

YEAR 1 — CHOICE

- Biochemistry and Molecular Biology
- Organic Chemistry

YEAR 2 — CORE

- Chemical Biology
- Drug Action and Production
- Drug Development

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Natural Product Chemistry
- Structure Determination of Biomolecules
- Medicinal Chemistry Building Blocks
- Pharmaceutical Drug Synthesis
- Drug-Receptor Noncovalent Interactions
- Bioconjugation Methods
- Binding and Enzyme Assays
- Pharmaceutical Manipulation of the Immune System
- Chemical Biology Approaches in Genomics, Proteomics and Metabolomics
- Drug Development as Business
- Genetic Engineering and Synthetic Biology

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MEDICAL NATURAL SCIENCES (BSc)

"What really makes this program special is the close connections that are fostered between students and faculty. We learn from the knowledge and real-life industry experiences of our professors, and we students support and encourage each other. Together we explore our subject, together we are pioneers." ZEJUN CHEN, CHINA

PROGRAM OVERVIEW

The Medical Natural Sciences (MedNat) program specifically prepares students for later studies in medicine at a German state university. This preparatory program combines modules in natural sciences. life sciences and medicine with intensive German language courses. Students are taught the foundations of the natural sciences and modules are comprised of a series of lectures in disciplines such as organic chemistry and physics with corresponding lab courses. Students will also become familiar with the basic concepts of life sciences and medicine in specialized modules. The three intensive German modules not only consist of language classes, but also of seminars on Germany and its regions, the German healthcare system and the transition to German medical schools.

CAREER OPTIONS

MedNat prepares students to continue their studies at medical schools in Germany and to become medical doctors, or to start a scientific research career in biomedicine, molecular medicine or medical technology. The program has been designed for students from non-European Union countries, and provides the basis for successful study at renowned German medical schools. A Bachelor of Science (BSc) will be awarded after successful completion of the three-year program.

PREPARATORY PROGRAM

for later studies in medicine at a German state university

YEAR 1

- Foundations in Medicine I
- Foundations in Natural Sciences
- Intensive German I

YEAR 2

- Foundations in Medicine II
- Cellular Biology
- Intensive German II

YEAR 3

- Foundations in Medicine III
- Intensive German III

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PHYSICS (BSc)



"The academic standard at Jacobs University is really high. The classes are small and I study with many incredibly talented people. This is something I find motivating and inspiring. We work closely together and support each other."

GAUTAM RAI, INDIA

PROGRAM OVERVIEW

Physics has shaped our view of the world through its quest to understand the fundamental concepts of space, time and matter. It not only lays the foundation for other natural sciences, but physics is also a fundamental part of modern technology as it can be found in solar cells, computers and airplanes. The program covers an introduction to classical and modern physics followed by advanced courses in electrodynamics, relativity, quantum physics and solid state physics, to name just a few. It also includes a thorough mathematical education. Lectures are complemented by teaching labs. Students can participate in faculty research projects from early on in their studies.

CAREER OPTIONS

Graduates will find ample career opportunities: research positions in academia or engineering positions in research and development departments, for example in information technology, renewable energies, aerospace engineering or medical technology. These positions are in the interdisciplinary fields of biophysics, nanotechnology and geoscience. In addition, physicists work in the financial sector, consultancy or software development.

YEAR 1 — CHOICE

- Physics of Natural Systems
- Physics and Applied Mathematics

YEAR 2 — CORE

- Theoretical Foundations of Physics
- Physics of Matter
- Physics and Technology

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- Biophysics
- Advanced Optics and Laser Spectroscopy
- Nanoscience
- Particles and Fields
- Physics of Information Technology

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PSYCHOLOGY (BA)



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"One of the best things is that from the first day on you not only get a theoretical foundation but also gain practical skills. It feels good to know that I would be able to apply my knowledge anytime."

ANNA KUZNETSOVA. UKRAINE

PROGRAM OVERVIEW

The study program Psychology deals with the general principles of human behavior, feeling and thought, their empirical investigation, and the implications of research findings for theoretical questions in a variety of applied settings. At the center of this program is the role of human cognition and feelings in interaction and communication across multiple dimensions of diversity, with respect to the individual, dyads, groups, and within and between societies. Understanding and explaining related phenomena, such as conflict and cooperation, involves an interdisciplinary view of the interaction between biological, psychological and cultural processes. The program includes training in analytic and research methods, but also in a range of applied (interpersonal and intercultural) skills.

CAREER OPTIONS

Graduates pursue careers in fields related to human interaction and communication, including intercultural relations, diversity management, human resources, information and media, sales and advertising, politics and in non-governmental organizations. The program is a good preparation for advanced graduate studies in a variety of psychological disciplines.

YEAR 1 — CHOICE

■ Introduction to Psychology

YEAR 2 — CORE

- Biology, Brain and Cognition
- Humans in Social Context
- Applied Psychology

YEAR 3 — CAREER

(Exemplary course offerings for program-specific Specialization Module)

- The Psychology of Consumer Behavior
- Business Psychology and Cross-Cultural Management
- Implicit Leader Development and Personnel Training
- Diversity and Demographic Change:
 The Psychology of Healthy and
 Pathological Aging
- Demographic Change Management
- Attention and Psychological Disorders
- Psychology of Conflict/Conflict Resolution
- Thinking about Thinking: The Role of Meta-Cognition in Judgment Formation
- Diagnostics, Test Development and Educational Psychology
- Personality and Differential Psychology

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GRADUATE PROGRAMS



Graduate education at Jacobs University encompasses programs from the natural sciences and engineering, to the social sciences and economics. Completion of these programs leads to either a Master of Arts (MA) degree, a Master of Science (MSc) degree or a Doctor of Philosophy (PhD) degree.

At the graduate level, students deepen their knowledge on a given subject, extend their academic qualifications and further specialize in an area of their choice. At the same time, Jacobs University's graduate programs are guided by transdisciplinarity. Students are trained and encouraged to investigate and analyze issues from multiple perspectives and without clear-cut disciplinary boundaries.

Graduate programs at Jacobs University maintain the highest standards of teaching and learning. All new MA and MSc curricula are based on three pillars: Core, Career and Research. In the Core pillar, students become acquainted with the foundational and advanced aspects of their program. In the Career pillar, students acquire skills and tools to prepare them for their professional future. In the Research pillar, students engage themselves in scientific and industry projects and write their thesis. All MA and MSc programs comprise diverse learning platforms, including lectures, seminars, workshops, laboratory trainings and excursions.



For doctoral students, institutes such as the Bremen International Graduate School of Social Sciences provide excellent opportunities for research.

Beyond academia, graduate students take part in a wider intercultural community as part of campus life, a privilege that extends far beyond the confines of the classroom. Many students find that the option of living on campus truly rounds out their university experience.



AT A GLANCE

- Pursue graduate programs based on Core, Career and Research pillars
- Enhance your personal expertise
- Specialize in an area of your choice
- **⊕** Launch your professional career
- Join our worldwide network of Jacobs Alumni

DATA ENGINEERING (MSc)

COMPUTATIONAL LIFE SCIENCE (MSc)

PROGRAM OVERVIEW

In recent years, biological research has become increasingly interdisciplinary, focusing on mathematical modeling and on the analysis of system-wide quantitative information. Sophisticated high-throughput techniques pose new challenges for data integration and data interpretation. The Computational Life Science Program meets these challenges by covering computational, mathematical and theoretical approaches to biology and the life sciences. Students take a tailor-made curriculum comprising lectures, seminars and laboratory training. Courses cover foundational as well as advanced topics and methods. The program is geared toward students of bioinformatics, computer science, physics, mathematics and similar fields.

CAREER OPTIONS

Students of Computational Life Science are prepared for a career in biotechnology, biomedicine and related areas. Students of the program are qualified to move on to a PhD and to a career in academia and research institutions.

CORE - FOUNDATIONS OF COMPUTATIONAL LIFE SCIENCE

- Introduction to Computational Life Science
- Computational Life Science Colloquium

CORE — ELECTIVES AND EXAMPLES OF REMEDIAL COURSES

- Bioinformatics
- Computational Biology
- Nonlinear Dynamics

CORE — ADVANCED TOPICS AND APPLICATIONS SPECIALIZATION AREAS

- Computational Systems Biology
- Computational Physics and Biophysics
- Bioinformatics and RNA Biology
- Imaging and Modeling in Medicine
- Ecological Modeling
- Theoretical Biology
- Applied Mathematics
- Numerical Methods

CAREER - SKILLS AND LANGUAGES

- Skills courses
- Language courses

RESEARCH - LAB ROTATION

- Lab Rotation 1
- Lab Rotation 2

RESEARCH - MASTER'S THESIS

For more information, see: www.jacobs-university.de/complife Or contact us: complife@jacobs-university.de

PROGRAM OVERVIEW

Big data has turned out to have tremendous potential, but poses major challenges at the same time. On the one hand, big data is driving the next stage of technological innovation and scientific discovery. On the other hand, the global volume of data is growing at a pace which seems to be hard to control. Faced with these prospects and risks, the world requires a new generation of data specialists. The Data Engineering program offers a fascinating and profound insight into the methods and technologies of big data. It is concerned with foundational and advanced approaches to data acquisition, data management and data analysis. Students take a tailor-made curriculum consisting of lectures, tutorials, laboratory training and hands-on projects. In addition, students have an excellent chance of working in paid industry and research projects during the program.

CAREER OPTIONS

Demand for data engineers is very high. Students of the program work in areas such as IT, finance, the automotive industry, health and retail. Students of the program are qualified to move on to a PhD and to a career in academia and research institutions.

CORE - FOUNDATIONS OF DATA ENGINEERING

- The Big Data Challenge: Topics, Applications, Perspectives
- Big Data Bases and Cloud Services
- Principles of Statistical Modeling
- Data Analytics

CORE - ELECTIVES AND REMEDIAL COURSES

Choose from a large set of courses to acquire background/specialized knowledge in areas of your choice.

CORE — EXAMPLES OF ADVANCED METHODS AND APPLICATIONS COURSES

- Semantic Web and The Internet of Things
- Document Analysis
- Machine Learning
- Data Acquisition Technologies
- Big Data Management
- Data Visualization and Image Processing
- Statistical Modeling and Predictive Analytics
- Internet Security and Privacy

CAREER - SKILLS AND LANGUAGES

- Data Ethics
- Legal Foundations of Data Engineering
- Language courses
- Further skills courses

RESEARCH - INDUSTRY AND RESEARCH PROJECTS

- Advanced Project 1
- Advanced Project 2

RESEARCH - MASTER'S THESIS

For more information, see:

www.jacobs-university.de/data-engineering
Or contact us:

dataengineering@jacobs-university.de

PSYCHOLOGIE (BILINGUAL) (MSc)

PROGRAM OVERVIEW

Globalization and demographic change are creating numerous opportunities in many spheres of life, but also pose many challenges for diverse societies. Preparing students for a professional career, the MSc in Psychologie consists of courses from three different areas. Clinical psychology is concerned with understanding, preventing and relieving psychologically-based distress and with promoting subjective well-being and health. Industrial, organizational and business psychology studies human behavior in the workplace. The goal of intercultural psychology is to improve human interaction by understanding the cultural embeddedness of behavioral and mental processes. Two-thirds of the courses in this program are taught in German and one-third in English.

CAREER OPTIONS

The MSc Psychologie program complies with the guidelines of the Deutsche Gesellschaft für Psychologie and qualifies graduates for various professional fields, such as those in the health, social or education sectors. Possible professional fields include clinical diagnostics, counseling, training, evaluation, psychotherapy, market psychology and consumer research.

MODUL KLINISCHE PSYCHOLOGIE

- Einführung in die Klinische Psychologie
- Health Promotion and Counseling in a Diverse Society
- Klinisch-psychologische Forschung

MODUL ARBEITS- ORGANISATIONS-, UND WIRTSCHAFTSPSYCHOLOGIE

- Einführung in die Arbeits-, Organisationsund Wirtschaftspsychologie
- Entscheidungen (Decision Making) in Organisationen
- Organizational Behavior across Cultures

MODUL INTERKULTURELLE PSYCHOLOGIE

- Einführung in die kulturvergleichende Psychologie
- Intercultural Competence and Conflict Management
- Spezielle Probleme der angewandten Sozialpsychologie

MODUL FORSCHUNGSMETHODEN & PSYCH. DIAGNOSTIK

- Advanced Quantitative Methods
- Testtheorie und Testkonstruktion
- Evaluationsmethoden
- Gutachtentechnik

MODUL KOMMUNIKATION WISSENSCHAFTLICHER ERGEBNISSE — COURSE EXAMPLES

- Psychology and Social Media
- Techniken wissenschaftlichen Arbeitens
- Kolloquium

PRAKTIKUM Masterarbeit

For more information, see:

www.jacobs-university.de/msc-psychologie
Or contact us:

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SUPPLY CHAIN ENGINEERING AND MANAGEMENT (MSc)

PROGRAM OVERVIEW

A broad range of industries require professionals who are trained in designing, organizing and managing complex supply chain networks. Understanding your suppliers and supply chain risks is critical since their performance has a direct impact on a company's ability to produce and deliver. The ability to manage supply chains is therefore fundamental to success in the global economy.

Students of Supply Chain Engineering and Management learn how to initiate, maintain and restructure business processes, understand market dynamics and acquire modern leadership skills. They explore the relationships that create value for multiple stakeholders across organizations and cultures. Thus, the program perfectly matches needs within industry and beyond.

Students are offered a tailor-made curriculum consisting of seminars, workshops, excursions, tutorials, interactive case studies, exercises and online lectures using both group and self-study. Courses are aimed at problem familiarization, analysis skills and rational decision making. The curriculum represents a careful balance of learning, research and practical coordination.

CAREER OPTIONS

Supply Chain Management is a growing profession and is in high demand in Germany and around the world. Students of the program are prepared to become decision makers in an interconnected business world. Graduates work in areas such as automotive and aerospace industry, transportation, retail, purchasing, wholesale, consulting and information technology.

CORE - SUPPLY CHAIN FOUNDATIONS

- Introduction to Transportation, Logistics and Supply Chain Management
- International Purchasing and Business
- Advanced Business Mathematics
- Econometrics
- Law for Logistics/Business Law
- Ethics and Sustainable Business

CORE - SUPPLY CHAIN ENGINEERING

- Modeling and Simulation
- Supply Chain Engineering

CORE - SUPPLY CHAIN MANAGEMENT

- Strategic and Innovation Management
- Supply Chain Management
- Management of Logistics Service Providers
- Business Continuity Management

CAREER - LEADERSHIP. SKILLS AND LANGUAGES

- Communication and Presentation Skills
- Leading Teams and Groups
- Intercultural Competence and Management
- Project Management Concepts
- Decision Making
- Language Courses

RESEARCH - METHODS AND PROJECTS

- Introduction to Academic Writing
- Research Project
- Industrial Project

RESEARCH - MASTER THESIS

For more information, see: www.jacobs-university.de/scem
Or contact us: scem@jacobs-university.de



HOW TO APPLY

Admission to Jacobs University is based on a candidate's motivation, school and/or university achievements, personal references, and performance on required standardized tests. There is no application fee.

APPLICATION DEADLINES FOR UNDERGRADUATE STUDY PROGRAMS

EARLY DECISION	due by November 1
EARLY ACTION	due by December 1
EARLY ACTION II	due by February 1
ROLLING ADMISSION	due by June 1 for students who require a visa to enter and study in Germany and July 20 for EU students

APPLICATION DEADLINES FOR MASTER STUDY PROGRAMS

DEADLINE I	June 1 for students who require a visa to enter and study in Germany
DEADLINE II	July 15 for students not requiring a visa

If you are in your final year of study and have not yet completed your final examinations, you can still apply for any of the above deadlines. We will evaluate your application based on your grades to date.

For more information on the application process and a full list of requirements, please visit our website www.jacobs-university.de/apply-now

Or contact our Admissions Teams: admission@jacobs-university.de graduateadmission@jacobs-university.de

STAY CONNECTED

You Tube f 💆 🖇 🖸







Feel free to contact us if you have any questions.

Our Admissions Team is happy to help.





Those striving for a professional career that will bring them success in industry, business or government must look no further. Those who have set their sights on further studies at a leading university have also come to the right place. Jacobs University's outstanding transdisciplinary education and international perspective provide students with the best preparation possible and put them on the right path to achieving their academic goals.

Get to know Jacobs University's broad portfolio of pre-degree, undergraduate and graduate study programs and get ready to become a global player.

CONTACT

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