

RUB



RUHR-UNIVERSITÄT BOCHUM

INTERNATIONAL MASTER COURSES

at Ruhr-Universität Bochum





Welcome to Bochum

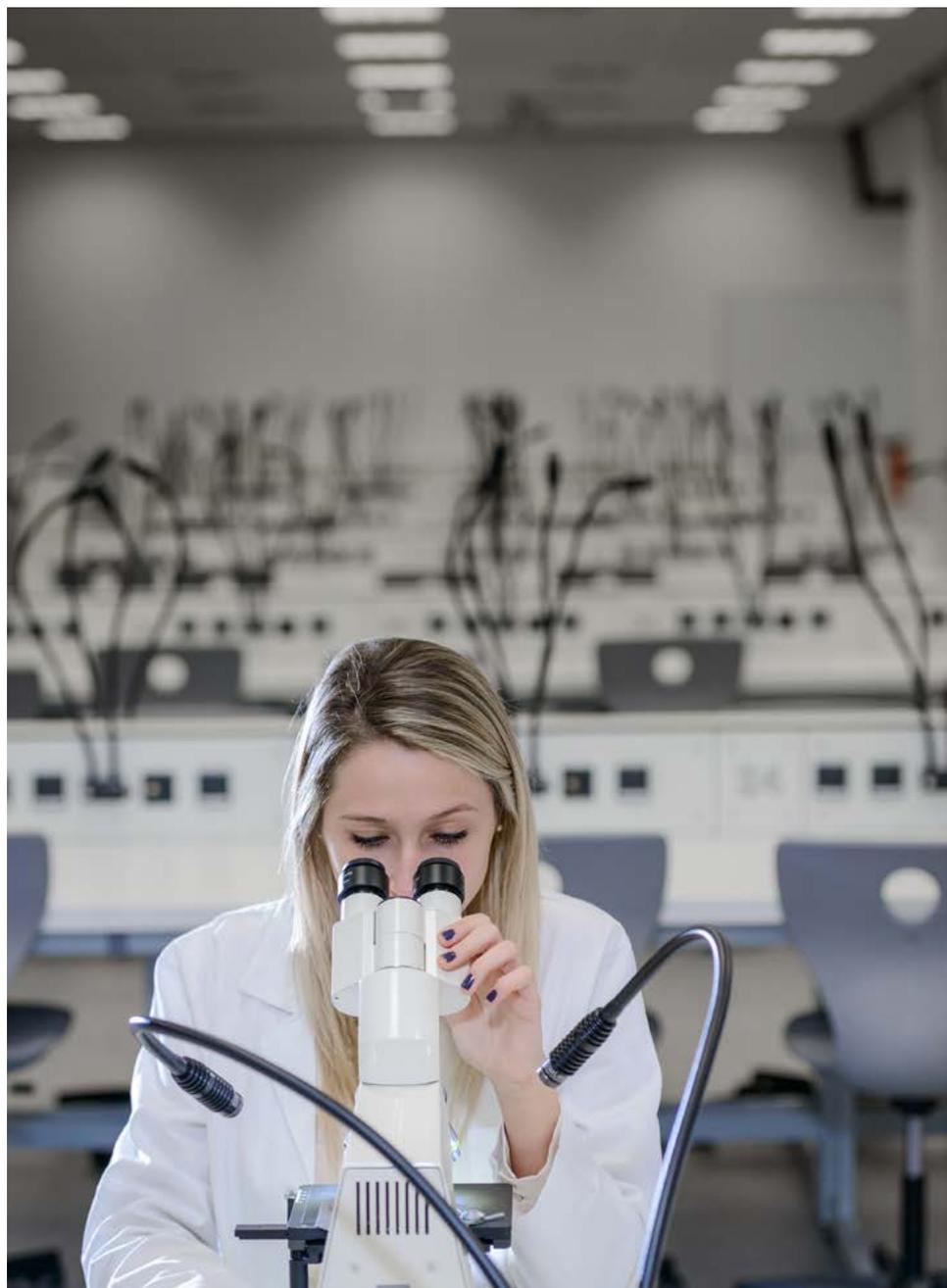
Welcome at Ruhr-Universität Bochum. It gives me great pleasure to see your interest in our university and our Master's degree courses offered in English.

Situated in the centre of the dynamic, hospitable Ruhr metropolis in the heart of Europe, Ruhr-Universität Bochum with its 20 faculties is home to 5,600 members of staff and 43,000 students. People from all over the world come together at the Ruhr-Universität campus in order to accomplish their goals. It is where people from 130 countries research and study. Approximately 3,400 international students are currently enrolled at Ruhr-Universität Bochum; in addition, we host some 500 exchange students every year.

Get to know us as a performance-driven and cosmopolitan university.
We are very much looking forward to welcoming you in person in Bochum.

Best regards

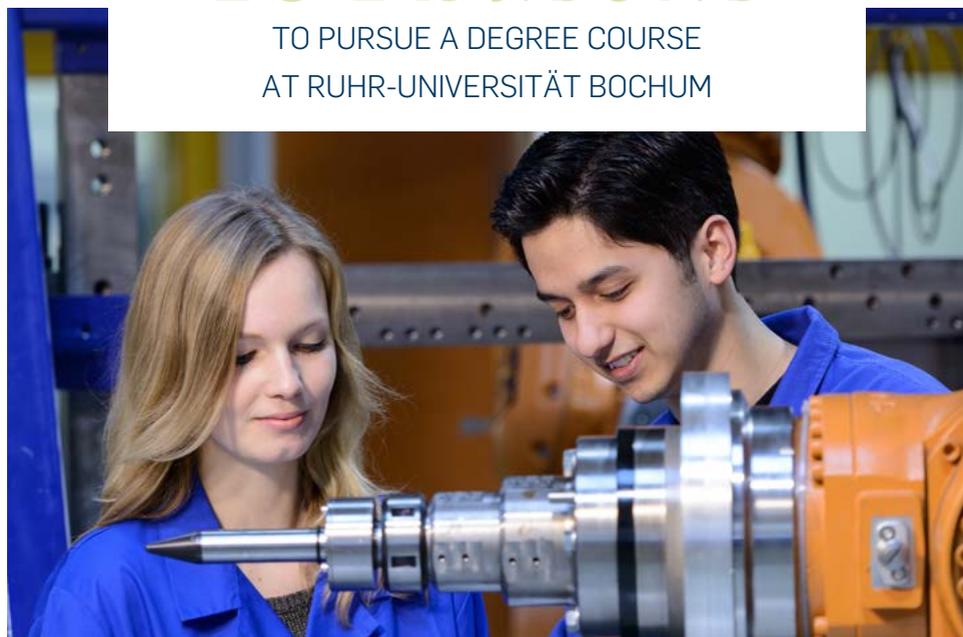
Prof Dr Axel Schölmerich, Rector





10 Reasons

TO PURSUE A DEGREE COURSE
AT RUHR-UNIVERSITÄT BOCHUM



1.

Great future perspectives: you'll get a degree with good reputation

Ruhr-Universität is cementing its position among the leading European universities of the 21st century. Our Excellence Programmes have gained international renown: the Cluster of Excellence RESOLV (Ruhr Explores Solvation) and cross-faculty and cross-discipline Research Departments rank highly worldwide and give the Ruhr-Universität's profile an edge. Moreover, Ruhr-Universität boasts an unmatched programme for fostering junior academics as well as an outstanding research infrastructure.

2.

The choice is yours: diverse study options offered in English

Ruhr-Universität offers approximately 180 degree courses in all major academic disciplines. Most lectures and seminars are offered in German; but there are also many Master's courses offered in English that attract highly qualified undergraduates from all over the world. This brochure provides an overview of the English-language degree courses.

3.

Bochum, your new home away from home

Bochum has a population of 365,000 including more than 55,000 students from the seven of the city's universities. Students spend their evenings and weekends in "Bermuda Dreieck" – a premier spot for nightlife with many cafés, restaurants and clubs. Each year in summer, the city centre is transformed into a large concert stage: during the "Bochum total" festival, tens of thousands of visitors party with national and international rock and pop newcomers. In the winter, the city of Bochum dazzles the visitors' with its Christmas market that captures the essence of German "gemütlichkeit". It is the place to combat icy weather with a mulled wine to the sound of medieval music. A somewhat more peaceful spot is lake "Kemnader See"; there, in close vicinity to the university campus, you can go sailing, surfing or pedal boating, or watch a beach volleyball game while enjoying a refreshing drink at the beach bar.

4.

World-class research and interdisciplinary learning: you're part of a high-performance network

As early as in their first semester, Ruhr-Universität students are integrated into the university's research activities, because the students of today are the top researchers of tomorrow. If you decide to pursue a career in academia after getting your Master's degree, Ruhr-Universität offers the best options: mentored by excellent researchers, 600 international PhD students get their international-standard doctorate. The Research School, which spans the entire campus, provides a comprehensive research-oriented, generic skills, international and professional development programme. It prepares the PhD students for executive positions in the world of academia and research as well as economy. They are offered an individual training programme to acquire relevant competencies that exceed their immediate research

project. Top-level research at Ruhr-Universität is organised in flexible, interdisciplinary Research Departments, where academics conduct joint research into interdisciplinary problems.

5.

You are not alone: service for international students

RUBiss – international student services is the port of call for international students, located at the International Office at Ruhr-Universität Bochum. RUBiss provides support with respect to all social, cultural and university matters, as well as administrative and legal questions. In order to ease your first steps at university, RUBiss organises orientation sessions specifically for international students before the beginning of each semester. During that time, international students are mentored and assisted by “Campus Guides”. Visiting the faculty is part of the programme as well as the exploration of the university campus. The RUBiss team is also there for you during the semester, answering your questions and organising diverse cultural and leisure activities, events, workshops and excursions.

6.

Your leisure time: sport, culture and many more at the campus

Six RUB students won the gold medal at the most recent Olympic Games in Rio de Janeiro. But it's not just top athletes who study and train at the campus; all students and members of staff can attend courses in 80 different types of sport. They range from football, through yoga, to rugby. In the city centre of Bochum, the university operates its own gym “Unifit”. The campus is also home to Musisches Zentrum. There, students have the opportunity to take theatre, art and music classes and, for example, practise with the large university orchestra and perform in concerts. The student services office “Akademisches Förderungswerk” likewise offers a diverse semester programme, where you can learn how to write a novel, how to cook classics of German cuisine, and how to direct a film.

7.

Your degree is affordable: cheap accommodations and no tuition fees

Ruhr-Universität Bochum does not charge any tuition fees. All students have to pay a social fee of approximately 320 euros per semester. The “Semester Ticket” (NRW Ticket) included in this contribution allows every student to use the regional public transport (bus and train) in North-Rhine Westphalia free of charge. Additionally, with this fee you will contribute to service features of the “Akademisches Förderungswerk” (student union). Bochum has an abundance of affordable and pleasant accommodations. On average, students in Bochum pay approximately 344 euros for their own apartment, which lies far below the average rent in Germany. A room in a shared apartment is available for a mere 220 euros. About 5,000 students in Bochum live in student halls run by “Akademisches Förderungswerk”. There, they either have their own room, including a bathroom, and share a kitchen with other students, or they share an apartment with one or several housemates.

8.

You are living in a safe country: Germany says welcome

Germany is a safe country – also in comparison with other countries. Police in Bochum and in all other cities are trustworthy and ready to help you in any situation. You can move around freely and don't have to observe any particular safety notices. If you want to travel in Germany, going by long-distance bus or train is a safe and comfortable option.

9.

Enjoy your mobility: Study and live in the heart of Europe

The semester ticket entitles all Ruhr-Universität students to use local public transport in all of North Rhine-Westphalia. It gives you the opportunity to explore this highly diverse federal state with its cities of Cologne, Düsseldorf, Aachen and Münster, or to make a trip to the neighbouring Netherlands. Travelling by railway, you can also easily visit other neighbouring countries, such as Austria, Switzerland, Belgium, and France.

10.

Learning German – just do it!

All international students can attend German language courses at Ruhr-Universität free of charge. The courses are selected to match the students' proficiency levels. You can attend language courses focusing on academic writing and publishing, terminology (engineering and economics), and regional and cultural aspects.

If you'd like to learn another foreign language, you have the choice between 15 different options. These courses, too, are free of charge for all students.





<i>Programme</i>	Degree	Duration	Start	Application deadline
<i>Biochemistry</i>	Master of Science	4 semesters	Winter semester	Online application: Deadline: 15th July
<i>Chemistry</i>	Master of Science	4 semesters	Winter and summer semester	Online application: Deadline: 15th January and 15th July
<i>Cognitive Science</i>	Master of Science	4 semesters	Winter semester	Online application: Deadline: 15th July
<i>Computational Engineering</i>	Master of Science	4 semesters	Winter semester	Online application at faculty: Deadline: 1st May
<i>Development-Management</i>	Master of Arts in Public Administration or Master in Development Studies degree from University of the Western Cape	3 semesters	Winter semester	Online application at faculty: Deadline: 30th September or 31st December
<i>Economics</i>	Master of Science	4 semesters	Winter and summer semester	Online application: 15th January and 15th July
<i>Ethics – Economics, Law and Politics</i>	Master of Arts	4 semesters	Winter semester	Online application: Deadline: 15th July



<i>Programme</i>	Degree	Duration	Start	Application deadline
<i>Humanitarian Action</i>	Master of Arts, European Master in International Humanitarian Action	3 semesters	Winter semester	Online application via platform, Deadline: 30th April
<i>Laser and Photonics</i>	Master of Science	4 semesters	Winter and summer semester	Online application: Deadline: 15th January and 15th July
<i>Materials Science and Simulation</i>	Master of Science	4 semesters	Winter semester	Online application at faculty: Deadline: for EU citizens: 15th September and for non EU-citizen: 15th March or 15th July
<i>Molecular and Developmental Stem Cell Biology</i>	Master of Science	4 semesters	Winter semester	Online application: Deadline: 15th July
<i>Molecular Sciences and Simulation</i>	Master of Science	4 semesters	Winter semester	Online application at faculty: Deadline: 15th July
<i>Transformation of Urban Landscapes</i>	Master of Science, Master of Engineering degree from Tongji University Shanghai	4 semesters	Winter semester	Online application: Deadline: 15th July

BIOCHEMISTRY

looks into questions such as ...

- What are the molecular mechanisms of carcinogenesis?
- How do the cells of an organism communicate?
- Which molecules are the molecular substrates for learning and memory building?
- Which molecular processes lead to genetic diseases?
- How can the function of biomolecules be studied?

This degree programme is unique, because ...

choosing their own research focus, biochemists carry out up-to-date research projects and are thus getting ready for their future activities in life-science research and professional life.

It provides the opportunity to specialise in the following fields

- Biochemistry of the Nervous System
- Biomolecular Chemistry
- Molecular Medicine (Medical Biochemistry)
- Plant Biochemistry and Microbial Biochemistry
- Protein Biochemistry
- Stem Cell Biochemistry

Who is suited?

Those who wish to enrol in this degree programme

... have:

an inquisitive mind, creativity and an interest in natural and life science phenomena

... enjoy:

conducting experiments and acquiring techniques and methods for both the scientific discourse and the hands-on experimental approach, with the aim of gaining new insights and developing new problem-solving strategies

... struggle through:

lectures, exams, exercises, seminars, mandatory lectures and, most importantly, work experiences (general internships and lab internships)

This degree programme is suited for graduates in the following subjects

- Biochemistry, B.Sc.
- life science Bachelor's degrees

Graduates from this degree programme frequently work

- as research biochemists
- as biochemists in the biotechnological industry
- as forensic scientists (e.g. in the police forces' forensic department)
- in the civil service (governmental control bodies)
- as management consultants

Where do I find help?

Academic advisory office

Prof. Dr. Irmgard Dietzel-Meyer

Phone: +49 (0)234 / 32-25 8 03

E-Mail: irmgard.d.dietzel-meyer@rub.de

→ studienangebot.rub.de/bioch-ma

How to apply

Online application: Deadline: 15th July, classes start in October

Language requirements: TOEFL 600 (paper-based), 250 (computer-based), 100 (internet-based), IELTS 6.0, or equivalent

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



CHEMISTRY

looks into questions such as ...

- How can so many different materials originate from a handful of elements?
- How do life processes work at the micro level?
- How can energy-saving processes be optimised – regardless whether in the car or in the mobile phone?
- How does one develop new drugs?
- How can new materials be discovered that would make power plant turbines or microchips more efficient?

This degree programme is unique, because ...

the chemists have the chance of manufacturing their research objects themselves, thus integrating sophisticated craftsmanship into natural science.

It provides the opportunity to specialise in the following fields

- Inorganic Chemistry
- Analytical Chemistry
- Functional Material
- Organic and Bioorganic Chemistry
- Physical Chemistry
- Technical Chemistry
- Theoretical Chemistry

Who is suited?

Those who wish to enrol in this degree programme

... have:

a creative mind and an interest in scientific phenomena

... enjoy:

conducting experiments

... struggle through:

the degree programme

This degree programme is suited for graduates in the following subjects

- Chemistry, B.Sc.

Graduates from this degree programme frequently work

- as chemists
- in the chemical industry
- as business consultants
- in the civil service
- with the fire brigade or police forces

Where do I find help?

Academic advisory office

Prof. Dr. Rochus Schmid

Phone: +49 (0)234 / 32-24166

E-Mail: Rochus.Schmid@rub.de

→ studienangebot.rub.de/che-ma

How to apply

Online application: Deadline: 15th July, classes start in October

Language requirements: TOEFL 600 (paper-based), 250 (computer-based), 100 (internet-based), IELTS 6.0, or equivalent

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



COGNITIVE SCIENCE

looks into questions such as ...

- What are the basic mechanisms of learning, forgetting, and remembering?
- What is the role of emotions in cognitive processing?
- What are the neural processes underlying object recognition?
- What does it mean to possess concepts and to be rational?
- How did the cognitive capacities of humans and animals evolve?

This degree programme is unique, because ...

it is an English-language, strongly research-focused and comprehensively interdisciplinary degree programme, systematically integrating philosophy, psychology, neuroinformatics and empirical neuroscience.

It provides the opportunity to specialise in the following fields

- Systematic Philosophy
- Psychology
- Neuroinformatics
- Empirical Neuroscience
- Cognitive Science

Who is suited?

Those who wish to enrol in this degree programme

... have:

good English-language skills, excellent Bachelor's degree in one of the subjects listed above, extremely high motivation to study

... enjoy:

exploring new subject matters, studying hard

... struggle through:

formal modelling and philosophical theories

This degree programme is suited for graduates in the following subjects

- Philosophy
- Psychology
- Neuroscience
- Mathematics
- Biology
- Computer Science
- Linguistics
- and similar subjects

Graduates from this degree programme frequently work

- as PhD students in a discipline related to cognitive science
- as scientists at universities and other research institutes
- in internationally operating corporations
- in research administration

Where do I find help?

Academic advisory office

Dr. Andreas Utsch

Phone: +49 (0)234 / 32-278 95

E-Mail: andreas.utsch@rub.de

→ studienangebot.rub.de/cosc-ma

How to apply

Online application: Deadline: 15th July, classes start in October

Language requirements: IELTS 6.0, TOEFL IBT 98, TOEFL PBT 597 or FCE

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



COMPUTATIONAL ENGINEERING

looks into questions such as ...

- Why are numerical mathematics and computer-aided simulations as well as precise understanding of materials necessary in order to fly into space?
- Which role do computer-aided simulations play in the development and optimisation of cars, airplanes and machined tools that are utilised in the fields of medicine, environmental protection, building design and alternative energy generation?
- How do computer-aided simulations help me to save time and money in the fields listed above?
- How do I gain the necessary understanding of mathematical, engineering and computer-related basic principles in an efficient manner?
- What does the Finite Element Method describe and which role does it play in the field of engineering simulations?
- How do I build up a foundation for an internationally successful engineering career whilst studying in a highly-qualified, English-language and multi-cultural environment?

This degree programme is unique, because ...

it is the longest-established CompEng degree programme in Germany, providing within an international, informal setting a comprehensive, labour market-targeted training in computer-aided construction and mechanics and laying excellent groundwork for a future executive career in research institutes and the industry.

It provides the opportunity to specialise in the following fields

- Finite Element Modelling & Simulation
- Computer-aided Construction
- Computer-aided Mechanics
- Communication competencies in an international context

Who is suited?

Those who wish to enrol in this degree programme

... have:

substantial know-how regarding construction engineering, mechanical engineering or a related engineering discipline and mathematics; plus an above-average command of the English language

... enjoy:

FE analysis, computer-aided simulation, construction of architectures and dynamic knowledge exchange within an international setting

... struggle through:

complex calculations, challenging theorems, programming scenarios and data-processing applications for the field of construction engineering

This degree programme is suited for graduates in the following subjects

- Construction engineering
- Mechanical engineering
- related engineering disciplines
- Mathematics

Graduates from this degree programme frequently work

- in managerial and executive positions in the industry, as well as R&D institutes (e.g. the automotive, aviation and aerospace industries)
- in academic and scientific fields (universities and other research institutes)

Where do I find help?

Academic advisory office

Dipl.-Ing. Jörg Sahlmen

Phone: +49 (0)234 / 32-22103

E-Mail: comp-eng@rub.de

→ studienangebot.rub.de/coen-ma

How to apply

Application at faculty: Deadline: 1st May, classes start in October

Language requirements: TOEFL (pbt: minimum score 550, cbt: minimum score 215,

ibt: minimum score 79) or IELTS (minimum score 6.0)

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



DEVELOPMENT MANAGEMENT

looks into questions such as ...

- What are the reasons of the (in)effectiveness of development aid and assistance?
- What are the reasons for the development or under-development of certain nations and regions?
- How can the effectiveness of programmes and projects of development cooperation be measured?
- What are the practical problems of planning, implementation, and evaluation of development programmes and projects in the existing framework of international developmental cooperation?
- What approaches of analysing development as a whole exist on a theoretical and practical level, seen through the lens of an interdisciplinary and international Master's degree programme?

This degree programme is unique, because ...

the innovative character of the IEE degree is not only the spectrum of methods that it offers to the student, but also its practical orientation throughout the programme; students are confronted with the practical problems of planning, monitoring and evaluating development programmes and projects.

It provides the opportunity to specialise in the following fields

- Project Management
- Political and Administrative Sciences
- Economic Evaluation Methods
- International Trade and Economic Reform
- Financial Management
- Empirical Social Research

Who is suited?

Those who wish to enrol in this degree programme

... have:

a high affinity for development related topics and early experience in the field of developmental cooperation – gained either through two years working experience or through relevant internships or voluntary work.

... enjoy:

an international, intercultural and interdisciplinary programme that requires an open mind and tolerance towards the reality of international development cooperation.

... struggle through:

a challenging international Master's programme that consists of 18 months of classes, workshops, study trips and examinations – there are no vacation, and you are obliged to spend time abroad at least twice within that period of time: for a summer school and for your field research.

This degree programme is suited for graduates in the following subjects

- Social Sciences
- Economics
- Geography
- Law
- Political Sciences
- Business Administration & Management
- Sociology

Graduates from this degree programme frequently work

- in development cooperations
- in international organisations
- in non-governmental organisations
- at ministries and central planning authorities
- at consultancies

Where do I find help?

Academic advisory office

Dr. Tobias Thürer

Phone: +49 (0)234 / 32-22458

E-Mail: ieemdm@rub.de

→ studienangebot.rub.de/dmm-ma

How to apply

Application at faculty: Deadline: 30th September 2017 for candidates who wish to apply for a DAAD-EPOS scholarship for the MADM at Ruhr-University Bochum; 31st December 2017 for all other candidates for the MADM at Ruhr-University Bochum, classes start in summer 2018

Language requirements: English: TOEFL: English; TOEFL: 79-80 points internet-based (equivalent to 213 points computer-based or 550 paper-based) or IELTS: band 6

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



ECONOMICS

looks into questions such as ...

- How do we handle the problem of increasingly scarce resource supply?
- Which economic problems are caused by the ongoing world population growth and how can they be solved?
- How do mandatory minimum wages affect enterprises and employees?
- How do kindergarten and university fees affect people's educational decisions?
- Why do most attempts of finalising a climate protection agreement fail?

This degree programme is unique, because ...

Students have the opportunity to take part in the English language programme "PHBS-RUB Double Master in Economics and Finance" offered by the Faculty of Management and Economics at RUB and the Peking University HSBC Business School (PHBS) in Shenzhen (China). This programme includes two semesters abroad: RUB Double Master students spend their first year at RUB and their second year at PHBS. After the regular study period of four semesters, successful Double Master students are awarded two degrees: Master of Science in Economics (RUB) and Master of Finance (PHBS).

It provides the opportunity to specialise in the following fields

- International Economics and Finance
- Economic Policy

Who is suited?

Those who wish to enrol in this degree programme

... have:

Bachelor's degree in an economics-related subject and good command of the English language

... enjoy:

studying economic issues, from the regulation of financial markets to environmental economics

... struggle through:

complex methods of empirical economic research

This degree programme is suited for graduates in the following subjects

- Management and Economics, B.Sc.
- 2-subjects B.A. that includes one subject in Economics
- equivalent degree courses

Graduates from this degree programme frequently work

- at ministries
- in public administration
- in international business organisations
- as political consultants

Where do I find help?

Academic advisory office

Michèle Lorraine Teufel

Phone: +49 (0)234 / 32-28993

E-Mail: econmaster@rub.de

→ studienangebot.rub.de/eco-ma

How to apply

Online application: Deadline: 15th January and 15th July, classes start in April and October

Language requirements: TOEFL (Test of English as a Foreign Language) with a minimum total score of 87 points (internet-based), IELTS (International English Language Testing System) with a minimum overall band score of 6.5, Cambridge First Certificate in English (FCE) or Cambridge Certificate in Advanced English (CAE)

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



ETHICS – ECONOMICS, LAW AND POLITICS

looks into questions such as ...

- Is justice a suitable normative category for the evaluation of economic and social developments on the global level?
- Which market players are moral players and which moral norms apply to them?
- In what way can administrations be responsibly structured?
- Which conceptions of dignity, solidarity and sustainable medical care compete with each other in the field of health-care policy?
- Does economy need moral reflection to work in the long term?

This degree programme is unique, because ...

it integrates both the normative competence of practical philosophy and social ethics and the descriptive knowledge of political science, law and economic science in a future-oriented manner and provides the foundation for interdisciplinary research and application-oriented studies.

It provides the opportunity to specialise in the following fields

- Poverty and Global Justice
- Ethics of the Financial Markets and Responsibility of Banks
- Ethic Aspects of Governance and Administration
- Ethics of the Healthcare System

Who is suited?

Those who wish to enrol in this degree programme

... have:

an interdisciplinary frame of mind, good English-language skills

... enjoy:

ethical issues and the empiric principles thereof

This degree programme is suited for graduates in the following subjects

- Philosophy
- Political Science
- Law
- Economics

Graduates from this degree programme frequently work

- in an academic position at universities and foundations
- as political and economic consultants

Where do I find help?

Academic advisory office

Marcus Reinecke

Phone: +49 (0)234 / 32-28750

E-Mail: eelp@ruhr-uni-bochum.de

→ studienangebot.rub.de/eelp-ma

How to apply

Online application: Deadline: 15th July, classes start October

Admission Essay

Language requirements: TOEFL paper-based test 550, TOEFL computer-based test 230,

TOEFL internet-based test 88, CPE (grades A-C), CAE (grades A-C), IELTS (bands 9-6), UNICERT II.

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



HUMANITARIAN ACTION

looks into questions such as ...

- What is humanitarian action?
- Which humanitarian action principles and policies are currently in effect on an international level?
- What are the legal foundations of humanitarian interventions?
- How can humanitarian action be efficiently organised and implemented in a crisis or emergency?
- How can the impacts of humanitarian disasters and crises on public health be reduced?

This degree programme is unique, because ...

the Master's degree programme Humanitarian Action is a Joint European Master's Degree that provides an excellent inter-university and interdisciplinary academic qualification for people who are working or wish to work in the field of humanitarian action. The Humanitarian Action Master's degree combines scientifically sound theoretical expertise and practical skills; it is supported by the renowned Network on Humanitarian Action (NOHA), which is backed by ten European universities.

It provides the opportunity to specialise in the following fields

- Humanitarian Action Management
- Humanitarian International Law
- International Relations in Humanitarian Action
- Public Health/Medicine in Humanitarian Action
- Anthropology in Humanitarian Action
- International Organisations in Humanitarian Emergencies

Who is suited?

Those who wish to enrol in this degree programme

... have:

experience (internship, volunteering etc.) in the field of humanitarian action or in related fields

... enjoy:

interdisciplinary questions and issues in an international environment

... struggle through:

interdisciplinary requirements and a labour and time-consuming degree course

This degree programme is suited for graduates in the following subjects

- Law
- Medicine
- International Relations/Political Science
- Sociology/Social Science
- Anthropology/Ethnology
- Psychology

- Management/Economics
- Geography/Regional Science
- Communication and Media Science

Graduates from this degree programme frequently work

- in UN organisations
- in non-governmental organisations
- in governmental organisations
- in international organisations
- in academic and research organisations

Where do I find help?

Academic advisory office

Laura Hofmann

Phone: +49 (0)234 / 32-21658

E-Mail: noha@rub.de

→ studienangebot.rub.de/huma-ma

How to apply

Online application via → www.nohanet.org

Deadline: 30th April, classes start in October

Language requirements:

- English: C1 certificate (according to the Common European Framework of Reference for Languages – CEFR) or TOEFL (550-600 paper, 215-250 computer and 93 internet) or IELTS (6–7) certificate.
- Spanish: B2-C1 certificate (according to CEFR).
- French: C1 certificate (according to CEFR).

Costs

12,000 EUR

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



LASER AND PHOTONICS

looks into questions such as ...

- How can data transmission be accelerated?
- How can data storage become more efficient?
- How can material processing be optimised?
- How can optical imaging be optimised?
- How can laser production become more efficient, faster and more powerful?

This degree programme is unique, because ...

students are given the opportunity to participate in industry-leading interdisciplinary research projects and top-ranking publications and to visit our research partners worldwide from the outset.

It provides the opportunity to specialise in the following fields

- Semiconductor Lasers
- Terahertz Technology
- State-of-the-art Optics and Measurement Technology
- Optical Spectroscopy and New Materials
- Micromanipulation and Spectroscopy
- Micro Structuring and Composites
- Photovoltaics and Thin-layer Chromatography

Who is suited?

Those who wish to enrol in this degree programme

... have:

substantial understanding of physics and mathematics, excellent English-language skills

... enjoy:

logical reasoning, understanding technological principles, making new discoveries and creating new designs, and promoting innovation

... struggle through:

different problems and scientific issues in the fields of optics and photonics

This degree programme is suited for graduates in the following subjects

- Electrical Engineering and Information Technology
- Mechanical Engineering
- Physics
- related subjects such as Material Science

Graduates from this degree programme frequently work

- as researchers
- as developers
- as consultancy providers
- as project managers
- as executive personnel

Where do I find help?

Academic advisory office

Marcel Lenz

Phone: +49 (0)234 / 32-29334

E-Mail: lap@ei.rub.de

→ studienangebot.rub.de/lap-ma

How to apply

Online application: Deadline: 15th July, classes start in October (winter term)

Deadline: 15th January, classes start in April (summer term)

Language requirements: OEFL (score of at least 70 out of 120 iBT or 505 out of 677 PBT or 175 out of 300 CBT), IELTS (overall score at least 4 out of 9) or PET (at least a pass).

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



MATERIALS SCIENCE AND SIMULATION

looks into questions such as ...

- Which changes at the atomic level affect the macrostructure?
- Which properties do materials have regarding their physical structure and mechanical specifications?
- How can certain materials, e.g. steel, be processed for the finished product to meet specific requirements?
- Which properties of a material are affected by changes to the microstructure?
- How can materials be processed to meet the high standards of, for example, the aviation and aerospace industry?

This degree programme is unique, because ...

it integrates both multi-scale simulation techniques and state-of-the-art experimental analysis processes and promotes hands-on application of the acquired skills in a project-focused team within an interdisciplinary field.

It provides the opportunity to specialise in the following fields

- Multi-scale Material Modelling
- Physical and Mechanical Material Properties
- Microstructure-Property Relationships
- Numerical Modelling
- Material Processing and Characterisation
- Light Elements in Metallic Alloys
- Materials for Aviation and Aerospace Applications

Who is suited?

Those who wish to enrol in this degree programme

... have:

basic understanding of the behaviour and numerical modelling of materials, substantial understanding of material science or solid-state physics

... enjoy:

an international, interdisciplinary and intercultural field

... struggle through:

quantum mechanics, thermodynamics, material properties and characterisation, implementation of physical and mathematical models in simulation applications, basic programming

This degree programme is suited for graduates in the following subjects

- Material Science
- Mechanical Engineering
- Physics
- Chemistry

- Construction Engineering
- Mechanics
- Nanotechnology
- Computer Science
- Mathematics

Graduates from this degree programme frequently work

- in academia
- in research institutes
- in R&D departments in the industry

Where do I find help?

Academic advisory office

Jutta Kellermann

Phone: +49 (0)234 / 32-29332

E-Mail: mss@icams.rub.de

→ studienangebot.rub.de/mass-ma

How to apply

Online application at faculty: Deadline: for EU citizens: 15th September, classes start in October

Deadline: for non EU-countries: 15th March or 15th June, classes start in October

Language requirements: TOEFL: minimum score 550 points paper-based, 215 computer-based or 79 Internet-based; the TOEFL score must be sent to us directly from ETS; institution code: 3580

IELTS: minimum score 6.0; the IELTS score must be sent to us directly from ETS

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



MOLECULAR AND DEVELOPMENTAL STEM CELL BIOLOGY

This degree programme is unique, because ...

breakthroughs have been made in the field of stem cell research in recent years, leading to an increased demand for qualified professionals. So far, despite the demand from the pharmaceutical industry, no German university has introduced that degree. Thanks to the support of the Stem Cell Network North Rhine-Westphalia, the integration of the Max Planck Institute for Molecular Biomedicine in Münster, and the proximity of the Healthcare Campus North Rhine-Westphalia, the local conditions are excellent.

Who is suited?

Those who wish to enrol in this degree programme

Have a BSc in Biology/Molecular Biology, or State Examination/Master of Dentistry, or a degree in Human or Molecular Medicine. Basic maths and English skills (TOEFL test).

This degree programme is suited for graduates in the following subjects

- Biology
- Biochemistry
- Medicine
- Life Sciences

Graduates from this degree programme frequently work

- in the pharmaceutical industry or scientific institutions
- They are also qualified to study for a scientific or medical doctorate.

Where do I find help?

Faculty of Medicine

Christiane Gelhaus

Tel. +49 (0) 2 34-3 26 8 16

E-Mail: christiane.gelhaus@rub.de

→ studienangebot.rub.de/scb-ma

How to apply

Online application Deadline: 15th July, classes start in October.

Language requirements: TOEFL 550 [written], 215 [computer based],

79 [internet based] or IELTS 6.0).

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket

which is valid for public transport within the state of North Rhine-Westphalia





MOLECULAR SCIENCES AND SIMULATION

This degree programme is unique, because ...

... it facilitates an early start in research.

... it offers an interdisciplinary education at the intersection of disciplines with high growth potential.

... it offers international experience at an early phase of education.

... it focuses on the molecular understanding of chemical reactions and biochemical processes.

We are research-oriented, interdisciplinary and intercultural by design.

Who is suited?

Those who wish to enrol in this degree programme

are very interested in the interdisciplinary intersection of “chemistry-physics-biology-applied mathematics”. They may be very good Bachelor’s graduates in these subjects, but also engineers with a related degree. A sound knowledge of mathematics, chemistry, physics and English are crucial for a successful application.

This degree programme is suited for graduates in the following subjects

- Chemistry
- Physics
- Biology
- Biochemistry
- Mathematics
- Engineering

Graduates from this degree programme frequently work

- as chemists and physicists

Where do I find help?

Academic advisory office

Dr. Rachel Glaves

Phone: +49 (0)234 / 32-24260

E-Mail: imos@rub.de

→ studienangebot.rub.de/molss-ma

How to apply

Online application at faculty: Deadline: 15th July, classes start in October

Language requirements: TOEFL 600 (paper-based), 250 (computer-based), 100 (internet-based), IELTS 6.0 or equivalent.

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia



TRANSFORMATION OF URBAN LANDSCAPES

looks into questions such as ...

- In what way are urban landscapes in Europe and in China changing and how can we grasp those changes?
- Which social, economic and ecological challenges do urban landscapes face?
- How can the transformations of urban landscapes be understood and explained?
- Which tools, concepts and methods can be identified in the context of transformation processes?
- Which tools, concepts and methods do the leading players deploy to influence the transformation processes?

This degree programme is unique, because ...

as an intercultural and interdisciplinary “school of thought” it communicates transformation competencies that help student influence the development of urban landscapes in a sustainable manner.

It provides the opportunity to specialise in the following fields

- Spatial Analysis Competencies
- Planning and Governance Competencies
- Intercultural Competencies

Who is suited?

Those who wish to enrol in this degree programme

... have:

advanced knowledge in the field of spatial planning, advanced English-language skills

... enjoy:

working in a manner that is project-focused and, at the same time, backed by a sound theoretical foundation (indoors in the office and outdoors in the field)

... struggle through:

theoretical and methodical principles of spatial analysis (socio-economic, ecological) and spatial construction; spending one year in China

This degree programme is suited for graduates in the following subjects

- Geography
- Spatial Planning
- related national and international degree programmes

Graduates from this degree programme frequently work

- in national and international planning offices
- in national and international consulting companies
- in development cooperation organisations
- with regional and municipal planning authorities
- in university and non-university research institutes

Where do I find help?

Academic advisory office

Dr. Dennis Edler

Phone: +49 (0)234 / 32-234 01

E-Mail: dennis.edler@rub.de

→ studienangebot.rub.de/tul-ma

How to apply

Online application: Deadline: 15th July, classes start in October

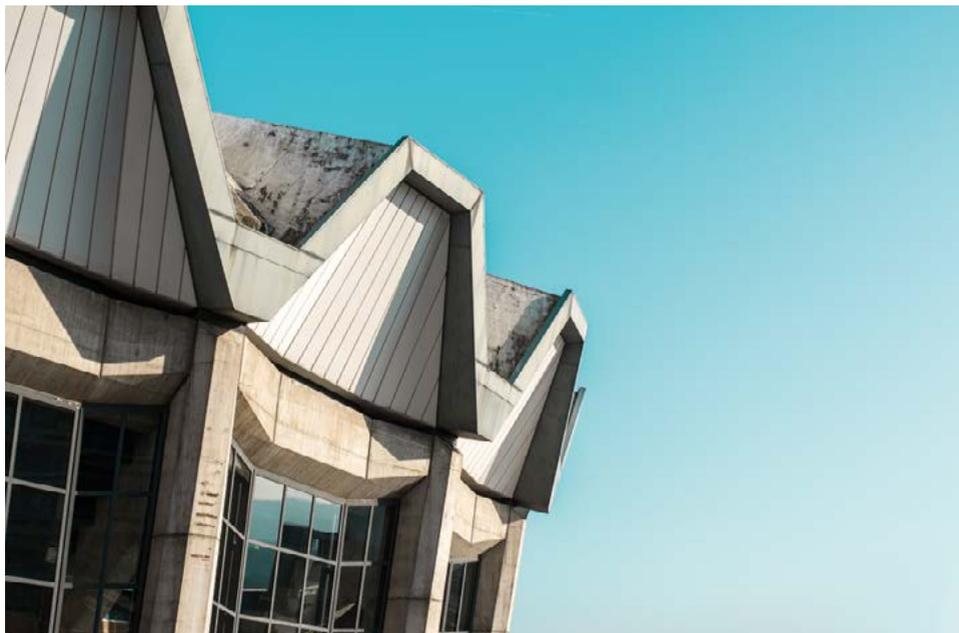
Language requirements: ELTS 6,0, TOEFL IBT 98, TOEFL PBT 597 oder FCE (First Certificate in English).

Costs

No tuition fees

Social fee of approx. 320 EUR per semester, including a semester ticket which is valid for public transport within the state of North Rhine-Westphalia





Contact:

Ruhr-Universität Bochum
International Office
RUBiss – international student services
Studierendenservicecenter building (SSC)
Universitätsstr. 150
44780 Bochum

Phone: +49 (0)234/32-22199
E-Mail: rubiss@rub.de

Additional information for international students:

→ international.rub.de/rubiss

Ruhr-Universität Bochum in the heart of Europe



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- - - Flight