INTERNATIONAL COURSE CATALOGUE
SUMMER SEMESTER 2017

Degree programmes, seminars and lectures taught in English and other foreign languages
INTERNATIONAL COURSE CATALOGUE

Summer Semester 2017

Degree programmes, seminars and lectures taught in English and other foreign languages
Dear student, dear researcher, dear guest,

This is the International Course Catalogue (ICC) for Ruhr-Universität Bochum, put together by RUBiss – RUB international student services of the International Office. The International Course Catalogue gives an overview of RUB’s classes, which are taught in foreign languages. It is aimed at international students wanting to organise their semester programme, prospective students planning on studying in Bochum, or partners and guests wishing to gain a general idea of RUB’s international courses and degree programmes.

All courses are open to exchange students and students of related subjects.

It contains the following information:

1. A compilation of seminars and lectures (Bachelor, Master and PhD) held in English or other foreign languages:
   Many of RUB’s departments offer seminars and lectures in English or other foreign languages. These are NOT usually part of an international degree programme.
   The ICC provides information about the content of the classes and prerequisites for admission, as well as credit points and contact persons. It also states which courses can be accredited to the “Optionalbereich”, and which ones are especially suitable for exchange students.

2. Additional information on studying and researching internationally at RUB:
   RUB’s international profile, a list of international (English) Master and PhD programmes as well as double and joint degree courses, exchange programmes, RUBiss – RUB international student services, Welcome Centre for internationally mobile researchers, application and admission, contact addresses.

We hope that you will find the International Course Catalogue a helpful guide for your semester programme, and wish you every success in the new semester!

Your RUBiss – RUB international student services team
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THE RUHR-UNIVERSITÄT BOCHUM

Located in the midst of the dynamic, hospitable metropolitan area of the Ruhr, in the heart of Europe, Ruhr-Universität Bochum (RUB) with its 20 faculties is home to 5,600 employees and over 43,000 students from 130 countries. All the great scientific disciplines are united on one compact campus. RUB offers approximately 150 bachelor’s and master’s degree programmes in various combinations.

Opened in 1965 as the first new university to be established in Germany following the Second World War and also the first university in the Ruhr area, RUB is now one of Germany’s biggest universities and on its way to becoming one of the leading European universities of the 21st Century.

The university’s greatest strength is its interdisciplinary cooperation. Interfaculty and interdisciplinary Research Departments, which are nationally and internationally networked, sharpen RUB’s profile.

What makes it all come alive, are the people who meet on campus with their thirst for knowledge, their curiosity and their commitment. They help shape the RUB and their open-mindedness makes RUB an attractive place for people from around the world: More than 5,500 international students, approx. 830 international PhD students and international researchers are studying and working at RUB. About 500 international exchange students spend time at RUB each year and just as many RUB students complete parts of their degree abroad.

Research at RUB is internationally linked and geared towards internationalisation: RUB has signed collaboration agreements with numerous prestigious partner universities and these collaborations are put into practice by way of the active exchange programmes and various projects, which are taking place for students and researchers. RUB is a member of the Utrecht Network and further international university networks in the areas of research and teaching. It has about 350 partner universities in the ERASMUS Programme. It is also running liaison offices in New York, Moscow and São Paulo/Rio de Janeiro with its neighbouring universities Dortmund and Duisburg-Essen as part of the University Alliance Ruhr (UA Ruhr).

International students, PhD students and international researchers can benefit from a number of extraordinary services:

- RUBiss – RUB international student services provides extensive information, support and advice for all international students.
- Incoming and outgoing exchange students are offered a wide range of exchange programmes with partner universities worldwide, as well as special services at RUB.
- Research School is the university-wide graduate school of RUB supporting all doctoral researchers on campus by training of personal and interdisciplinary skills, career guidance, personal counselling and with research-related training offered by the faculties.
- Internationally mobile researchers are welcomed and supported in RUB’s Welcome Centre.
SERVICE FOR INTERNATIONAL MEMBERS

RUBiSS – INTERNATIONAL STUDENT SERVICES

In order to be able to study successfully, it is important that you feel comfortable, both at university and in daily life. Only then will you be able to focus on your studies. As part of the International Office, RUBiSS is your contact for important issues, which go beyond your academic studies, such as advice and support in social, cultural and university-related affairs, as well as support with administrative tasks and legal affairs concerning foreign nationals.

RUBiSS offers:
- Support and advice on various matters
- Orientation and welcome events
- Events and excursions
- Various offers for prospective students with refugee background

We assist you in arranging your legal affairs with the foreign citizens’ office, the city of Bochum and various other officials. We will also advice you on general questions concerning your studies and living in Bochum and Germany.

Events are organised both at the beginning and during the semester. On various excursions, you will have the opportunity to become acquainted with your new surroundings, settle in and meet fellow students.

At the start of every semester, RUBiSS organises orientation events for international students: Orientation Days take place in the weeks before lectures start and are open to all new international students. Participation is free of charge.

Every semester, members of staff from the International Office, accompanied by the Rectorate, welcome the new international students to RUB at the International Welcome. RUBiSS as well as various university institutions introduce themselves and present their offers for international students.

The RUBiSS team publishes a semester programme every semester. In it, you will find a range of different events, workshops and excursions. You can also register for our newsletter to stay informed on current events.

Semester programme: www.international.rub.de/rubiss/freizeit/programm.html.en

Newsletter: international.rub.de/rubiss/start/newsletter.html.en

RUBiSS, International Office
Email: RUBiSS@rub.de
Internet: www.international.rub.de/rubiss
Facebook group: RUBiSS – RUB international student services
EXCHANGE PROGRAMMES

RUB offers a variety of opportunities for student exchange. An exchange programme is certainly the easiest, safest and cheapest of all possibilities to go abroad. The most commonly known exchange programme is the EU’s ERASMUS. Ruhr-Universität Bochum has some 300 partner universities all over Europe. Students can spend 3 - 12 months abroad in one of the 28 EU member states, Iceland, Norway, Macedonia (FYROM), Liechtenstein and Turkey and they will be supported financially by the ERASMUS Mobility Grant.

In addition to the ERASMUS universities involved in the exchange programme, RUB closely cooperates with the following universities:

- Universidade Federal de Minas Gerais, Belo Horizonte, Brazil
- Universidade de Brasília, Brazil
- Universidade Federal do ABC, São Paulo, Brazil
- Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
- Universidade Federal do Rio Grande do Norte, Natal, Brazil
- Universidade Federal Fluminense (UFF), Niterói, Brazil
- Universidade Federal de Juiz de Fora (UFJF), Juiz de Fora, Brazil
- Universidad Tecnológica Nacional, Argentina
- Universidad de Monterrey, Mexico
- Universidad Autónoma de Nuevo León, Monterrey, Mexico
- Universidad Autónoma Metropolitana, Mexico City, Mexico
- Benemérita Universidad Autónoma de Puebla, Mexico
- Universidad Católica del Norte, Antofagasta/Coquimbo, Chile
- Universidad de La Serena, Región de Coquimbo, Chile
- Universidad Santo Tomás, Colombia
- National Taiwan University, Taipei, Taiwan
- EWHA Women’s University, Seoul, Korea
- Soongsil University, Seoul, Korea
- Sogang University, Seoul, Korea
- Sungkyunkwan University, Seoul
- Kyungpook National University, Daegu, Korea
- Duksung Women’s University, Seoul, Korea
- Osaka University, Japan
- University of Tsukuba, Japan

The following universities offer RUB students a monthly scholarship in addition to the reimbursement of tuition fees:

- Université François Rabelais in Tours, France
- Universidad de Oviedo, Spain
- Belarusian State University Minsk, Belarus
- Tongji University in Shanghai, China

Students at all of these universities may study at RUB for one or two semesters without having to pay any tuition fees.

RUB is also a member of the Utrecht Network. Within this network, 32 European universities are working together on topics of internationalisation and exchange. The Utrecht Network has strong links with the MAUI (Mid-America Universities International) Network and AEN (Australian-European Network). The following universities are members of these networks:
a) MAUI:

<table>
<thead>
<tr>
<th>University</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baylor University</td>
<td>Waco, TX</td>
</tr>
<tr>
<td>Kansas State University</td>
<td>Manhattan, KS</td>
</tr>
<tr>
<td>Missouri University of Science &amp; Technology</td>
<td>Rolla, MO</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>Stillwater, OK</td>
</tr>
<tr>
<td>Southern Illinois University</td>
<td>Carbondale, IL</td>
</tr>
<tr>
<td>Texas Tech University</td>
<td>Lubbock, TX</td>
</tr>
<tr>
<td>University of Kansas</td>
<td>Lawrence, KS</td>
</tr>
<tr>
<td>Texas State University</td>
<td>San Marcos, TX</td>
</tr>
<tr>
<td>University of Missouri</td>
<td>Kansas City, MO</td>
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<tr>
<td>University of Missouri</td>
<td>St. Louis, MO</td>
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<tr>
<td>University of Nebraska</td>
<td>Kearney, NE</td>
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<td>University of Nebraska</td>
<td>Lincoln, NE</td>
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<tr>
<td>University of Nebraska</td>
<td>Omaha, NE</td>
</tr>
<tr>
<td>University of Oklahoma</td>
<td>Norman, OK</td>
</tr>
</tbody>
</table>

b) AEN:

<table>
<thead>
<tr>
<th>University</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deakin University</td>
<td>Victoria</td>
</tr>
<tr>
<td>Edith Cowan University</td>
<td>Western Australia</td>
</tr>
<tr>
<td>Griffith University</td>
<td>Queensland</td>
</tr>
<tr>
<td>University of Tasmania</td>
<td>Tasmania</td>
</tr>
<tr>
<td>University of Western Sydney</td>
<td>New South Wales</td>
</tr>
<tr>
<td>University of Wollongong</td>
<td>New South Wales</td>
</tr>
</tbody>
</table>

Student exchanges take place on a regular basis through the MAUI Utrecht Network Exchange Programme and the AEN Utrecht Network Exchange Programme. Students from all areas of study may participate (only students from the Faculty of Medicine are excluded from the MAUI and AEN Utrecht Network exchange programmes). All tuition fees at the host institution will be reimbursed.

Furthermore, many faculties run their own exchange programmes:

Faculty of Historical Science:
- Kyushu University, Japan

English/American Studies:
- Central Michigan University, USA

Slavonic Studies:
- Institute of European Cultures, Moscow, Russia
- Moscow State University of Railway Engineering, Russia
- Vologda State Pedagogical University, Russia
- Vologda State Technical University, Russia
- Belarusian State University Minsk, Belarus
- Simferopol State University, Ukraine

Faculty of Economics:
- Tongji University in Shanghai, China
- Peking University HSBC Business School (PHBS), Shenzhen, China
Studying at RUB

- Nihon University in Tokyo, Japan
- Wollongong Universität, Australien

Faculty of Social Science:
- El Colegio de la Frontera Norte, Mexico

Faculty of East Asian Studies:
- Nihon University in Tokyo, Japan
- Fukushima University in Fukushima, Japan
- Keio University in Tokyo, Japan
- Okayama University in Okayama, Japan
- Mie University in Tsu, Japan
- Kwansei Gakuin University in Nishinomiya, Japan
- Kyushu University, Japan
- Niigata University, Japan

Faculty of Civil and Environmental Engineering:
- Toyohashi University of Technology in Toyohashi, Japan

Faculty of Mechanical Engineering:
- Toyohashi University of Technology in Toyohashi, Japan
- Tongji University in Shanghai, China
- Drexel University in Philadelphia, USA
- Virginia Tech in Blacksburg, USA

Faculty of Electrical Engineering and Information Technology:
- Purdue University in West Lafayette, Indiana, USA
- Drexel University in Philadelphia, USA

Faculty of Geosciences:
- Universidad Nacional de San Juan, Argentina

Faculty of Medicine:
- Gunma University, Japan
- University of Toyama, Japan

Students from those universities listed above, who are interested in spending one or two semesters at RUB, should contact the International Office or their faculty at their home university to check exchange possibilities. After being nominated for an exchange programme, you are welcome to contact RUB’s Incoming Exchange Student Services.

RUB students wanting to spend part of their studies abroad are welcome to contact the Outgoing Exchange Student Services located at the International Office.
Incoming Exchange Student Services
International Office
Ruhr-Universität Bochum
Email: meike.schaich@uv.rub.de
    Theodoros.markakidis@uv.rub.de
Internet: www.international.rub.de/gaststudis

Outgoing Exchange Student Services
International Office
Ruhr-Universität Bochum
Email: anika.odenbach@uv.rub.de (USA, Australia, ERASMUS)
    maren.scharwald@uv.rub.de (Asia, ERASMUS)
    uta.baier@uv.rub.de (Latin America, ERASMUS)
Internet: www.international.rub.de/ausland
RUB RESEARCH SCHOOL: MORE THAN RESEARCH

Research School supports doctoral researchers and early postdocs during their research careers at RUB.

RUB Research School and its 20 faculties promote top-level postgraduate education in an international and interdisciplinary research environment and support the individual research interests of doctoral researchers. All enrolled doctoral researchers - from natural sciences and engineering to the life sciences and the humanities and social sciences - are members of the Research School. Early postdocs are also most welcome to participate in our programme.

Research School makes visible the research-related training offered by the faculties and research areas of RUB. Dedicated counselling offers, training of personal skills (e.g. scientific communication, proposal writing, leadership skills) and various inter- and transdisciplinary events such as Science College, Research Day support young researchers during their doctorate. In addition, we offer career guidance for a career in- and outside academia preparing doctoral researchers and early postdocs for their next career steps. If you have questions concerning planning or starting your doctorate at RUB you are most welcome to contact us.

Doctoral researchers who wish to internationalize their research project and broaden their scientific network around the world can be financially supported by Research School PLUS until the end of 2017.

On our website, doctoral researchers and postdocs get all information about our programme and offers. You are always most welcome to contact us any time during our office hours and come with your questions about starting or doing a Dr. or a Ph.D. at RUB.

We are looking forward to seeing you soon!

Central Coordination Office
RUB Research School
Ruhr-Universität Bochum
Internet: http://www.research-school.rub.de
WELCOME CENTRE FOR INTERNATIONAL RESEARCHERS

The Welcome Centre is the place to go for international researchers and their families who seek advice and support regarding their research stay at Ruhr-Universität Bochum. We offer information and services on topics such as residence formalities, health insurance or family issues, as well as helpful hints for a smooth social integration and everyday life in Germany. Welcome Centre also provides advice to hosts and faculties at RUB.

Services

- Guide for international researchers
- Webpage with information and forms in English and German language
- Support in dealing with formalities and authorities
- Guest apartments for international researchers and their families
- Information on other relevant issues connected to your stay
- International Lounge

Welcome Centre Events

The Welcome Centre invites international researchers and their families to various events such as excursions throughout the region, receptions of the rectorate on a regular basis, intercultural trainings, information events and many more.

International Lounge

Ruhr-Universität Bochum has a modern, comfortable lounge for international researchers, their families and hosts. At the lounge they have the possibility to get together to talk and work or simply to have a coffee and read an international journal. During opening hours there is always someone present at the Lounge to answer any general questions you may have.

EURAXESS

The Welcome Centre in Bochum is registered as a EURAXESS Service Centre – EURAXESS is an EU wide network providing information and advice for internationally mobile researchers.

Welcome Centre, International Office
Ruhr-Universität Bochum
International Lounge, „Mensa“ building
Email: welcome-centre@rub.de
Internet: www.rub.de/welcome-centre

International Lounge for visiting researchers:
Mensa building, main entrance, Bistro level
STUDYING AT RUB

DEGREE PROGRAMMES TAUGHT IN ENGLISH

Numerous degree programmes at RUB are taught in English, many of them specialising in contemporary research topics and/or offering double and joint degrees with distinguished universities:

Lasers and Photonics
Faculty of Electrical Engineering and Information Technology
Degree: Master of Science (single degree)
Application deadline: 15 July (winter semester) and 15 January (summer semester)
Prerequisites: above-average Bachelor’s degree (at least 6 semesters) in Electrical Engineering, Mechanical Engineering, Physics, Chemistry or similar; very good English language skills. See programme website for further details.
Fees: RUB’s social fee 311.88 € (per semester)
Contact: Biljana Cubaleska. Phone: +49 (0)234 32-29474, email: studienberatung@ei.rub.de
More information: www.ei.rub.de/studium/lap

Master of Arts in Development Management
Institute of Development Research and Development Policy
Degree: Master of Arts (single degree)
Application deadline: Next intake: October 2016. Application Deadlines will be published on the programme website.
Prerequisites: above-average BA or relevant degree in Political Science, Social Science, Law, Economics, Geography or any other subjects related to the planning and evaluation of development programmes and projects; practical experience in a relevant field; very good English language skills. See programme website for further details.
Fees: RUB’s social fee 311.88 € (per semester)
Special feature: DAAD scholarships available; twin programme in Cape Town, S.A.
Contact: Dr. Tobias Thürer, Phone: +49 (0)234 / 32-22448, email: ieemdm@rub.de

PhD in International Development Studies (IDS)
Institute of Development Research and Development Policy
Degree: PhD in International Development Studies
Application deadline: 30. April of a year. Application Deadlines will be published on the programme website.
Prerequisites: Qualified university degree (Master or an equivalent to the German Diploma or Staatsexamen) with an overall grade equivalent to 2.7 (fully satisfactory) in the German grading system after completion of relevant studies with a duration of at least 4 years. Qualified degree with an overall grade equivalent to 1.7 (fully good) in the German grading system after completion of relevant studies with a duration of at least three years plus preparatory studies for the PhD of usually three semesters. For international degrees the equivalence will be judged during the application process. Candidates who have to follow preparatory studies before admission to the PhD in International Development Studies can be accepted for such preparatory studies at the
Ruhr-University Bochum; very good English language skills. See programme website for further details: [www.development-research.org/index.php/study-programmes/phd-ids](http://www.development-research.org/index.php/study-programmes/phd-ids)

**Fees**: RUB’s social fee 311,88 € (per semester)
**Capacity**: Up to 10 PhD students per year.
**Duration**: 3 years
**Contact**: Dr. Martina Shakya, Phone: +49 (0)234 / 32-25149 email: ieePhD@rub.de

### Materials Science and Simulation

Interdisciplinary Centre for Advanced Materials Simulation (ICAMS)

**Degree**: Master of Science (single degree)

**Application deadline**: see [www.icams.de/content/masters-course-mss/application-and-admission](http://www.icams.de/content/masters-course-mss/application-and-admission)

**Prerequisites**: Bachelor’s degree (B. Sc.) or comparable degree in one of the following or related disciplines: Materials Science, Mechanical Engineering, Physics, Civil and Environmental Engineering, Electrical Engineering, Chemical Engineering, Power Engineering, Chemistry, Nanotechnology, Mathematics, Computer Sciences or Astronomy; very good English language skills. See programme website for further details.

**Fees**: RUB’s social fee 311,88 € (per semester)
**Contact**: Prof. Dr. rer. nat Alexander Hartmaier. Phone: +49 (0)234/32-29314, Email: mss@icams.rub.de / More information: [www.icams.de/mss](http://www.icams.de/mss)

### Master of Science in Biochemistry

Faculty of Chemistry and Biochemistry

**Degree**: Master of Science (single degree)

**Application deadline**: 15 July

**Prerequisites**: above-average German or equivalent Bachelor of Science in Biochemistry or a related field; very good English language skills. See programme website for further details.

**Fees**: RUB’s social fee 311,88 € (per semester)
**Contact**: Prof. Dr. Irmgard D. Dietzel-Meyer. Phone: +49 (0)234 / 32-25803, email: bc-schwerpunkte@rub.de

**More information**: [www.chemie.rub.de/studium/master/biochemie](http://www.chemie.rub.de/studium/master/biochemie)

### Molecular Sciences (iMOS)

Faculty of Chemistry and Biochemistry

**Degree**: Master of Science (single degree)

**Application deadline**: 15 July. The course starts in winter semester (October) each year.

**Prerequisites** A B.Sc. Degree or international equivalent with an average mark better than 1.9 in Chemistry, Physics, Biochemistry, Engineering or a related interdisciplinary subject; very good English language skills. See programme website for further details.

**Fees**: RUB’s social fee 311,88 € (per semester)
**Contact**: Dr. Gerhard Schwaab. Phone: +49 (0)234 / 32-24256, email: imos@rub.de

**More information**: [www.rub.de/imos](http://www.rub.de/imos)

### Master of Science in Chemistry

Faculty of Chemistry and Biochemistry
Degree: Master of Science (single degree)
Application deadline: 15 July
Prerequisites: above-average German or equivalent Bachelor of Science in Chemistry or a related field; very good English language skills. See programme website for further details.
Fees: RUB’s social fee 311.88 € (per semester)
Contact: Gundula Talbot: +49 (0)234 / 32-26908, email: gundula.talbot@rub.de.
More information: www.chemie.ruhr-uni-bochum.de/studium/master/chemie

Computational Engineering
Faculty of Civil and Environmental Engineering
Degree: Master of Science (single degree)
Application deadline: international students 1 May, national students 15 September
Prerequisites: above-average Bachelor’s (or comparable) degree in Civil Engineering, Mechanical Engineering or a related engineering field. Students who only have a Bachelor’s degree in Computer Science cannot be accepted. Very good English language skills, see programme website for further details.
Fees: RUB’s social fee 311.88 € (per semester)
Special feature: twin programme at the Vietnamese-German University in Ho Chi Minh City
Contact: Dipl.-Ing. Jörg Sahlmen. Phone: +49 (0)234 / 32-22103, email: comp-eng@rub.de
More information: compeng.rub.de

Geosciences – Resources and Energy
Faculty of Geosciences
Degree: Master of Science (single degree)
Application deadline: 15 July
Prerequisites: B.Sc. in Geosciences or related natural sciences, very good English language skills (see programme website for further details) and sufficient physical fitness to perform fieldwork
Fees: RUB’s social fee 311.88 € (per semester)
Special feature: prepares students for subsequent employment in the industry (mainly hydrocarbon industry)
Contact: Prof. Dr. Adrian Immenhauser. Phone: +49 (0)234 / 32-28250, email: adrian.immenhauser@rub.de
More information: www.gmg.rub.de/studium/studgang

Molecular and Developmental Stem Cell Biology
Faculty of Medicine
Degree: Master of Science (double degree)
Application deadline: 15 July (winter semester)
Prerequisites: Top Bachelor's degree in the Life Sciences (e.g. B.Sc. in Biology, Microbiology, Biomedicine, Molecular Biology) or a state examination/Master's in a medical subject; proof of good basic mathematical skills, very good English language skills. See programme website for further details: www.rub.de/istem
Fees: RUB’s social fee € 311,88 (per semester)
Contact: Prof. Dr. Brand-Saberi. Phone: +49 (0)234 32-24556, email: istem@rub.de
Master of Science in Economics
Faculty of Management and Economics
Degree: Master of Science (single degree)
Application deadline: 15 July (winter semester), 15 January (summer semester)
Prerequisites: A Bachelor’s degree in economics or a related discipline (business, statistics, mathematics, political science, international relations, etc.) with a duration of at least six semesters (180 ECTS credit points). As the program is taught entirely in English, applicants need to have very good English language skills. For further details on admission requirements please visit the programme website or contact the programme coordinator.
Fees: RUB’s social fee 311.88 € (per semester)
Contact: Dipl.-Ök. Michèle Lorraine Teufel, tel.: 0234 32-22687 email: econmaster@rub.de
More information: www.rub.de/econmaster/
Course catalogue: www.rub.de/econmaster/download.html

Master of Cognitive Science
Faculty of Psychology
Degree: Master of Science (single degree)
Application deadline: 15 July
Prerequisites: excellent Bachelor’s degree in philosophy, psychology, neuroscience, mathematics, biology, computer science or linguistics and similar subjects, extremely high motivation to study; very good English language skills. See programme website for further details.
Fees: RUB’s social fee 311.88 € (per semester)
Contact: Dr. Andreas Utsch, Tel.: 0234 / 32-27895, email: andreas.utsch@rub.de.
More information: studienangebot.rub.de/en/cognitive-science/master-1-subject

Criminal Justice, Governance and Police Science
Faculty of Law
Degree: Master of Criminal Justice, Governance and Police Science (M.A.)
Application deadline: 15 July
Prerequisites: a successful completion of a university/college degree (BA, BSc and MA, MSc or equivalent) degree in the program relevant subject areas (240 CPs*); at least one year of relevant practical experience after graduation; an excellent knowledge of the English language.
Fees: For Information on tuition fees, please contact tuitionfees@macrimgov.eu
Contact: Dr. Katrin List: Phone: +49 (0)234 32-25249, email: administration@macrimgov.eu, Skype: MACRIMGOV
Type: completely online/ part-time (studying while working)
More information: vmrz0183.vm.ruhr-uni-bochum.de/macrimgov/index.php

Ethics – Economics, Law and Politics
Jointly offered by the Faculties of Philosophy, Law, Economics and Social Science
Degree: Master of Science (single degree)
Application deadline: 15 July
**Prerequisites:** an interdisciplinary frame of mind, first graduation (BA) in Philosophy, Political Science, Law, or Economics; very good English language skills. See programme website for further details.

**Fees:** RUB’s social fee €311,88 (per semester)

**Contact:** Dr. Simone Heinemann: Tel.: 0234 / 32-24733, email: Simone.Heinemann@rub.de.

**More information:** studienangebot.rub.de/en/ethics-economics-law-and-politics/master-1-subject

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**Joint European Master’s Programme in International Humanitarian Action (NOHA)**

Institute of International Law of Peace and Armed Conflict

**Degree:** Master of Arts (joint degree)

**Application deadline:** 15 March

**Prerequisites:** Master's degree (or equivalent) in International Relations, History, Law, Medicine, Psychology, Sociology, Anthropology, Economics, Management, Geography, Spatial Sciences or related fields

**Fees:** participation costs €12,600 for non-European students; €8,400 for European students (one-off payment), RUB’s social fee €311,88 (per semester)

**Special feature:** Erasmus Mundus Programme

**Contact:** Prof. Dr. Hans-Joachim Heintze email: Hans-Joachim.Heintze@rub.de

**More information:** www.rub.de/ifhv

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**Double Master’s degree in Transformation of Urban Landscapes (TUL)**

Faculty of Geosciences, Department of Geography

**Degree:** Master of Science in Transformation in Urban Landscapes (RUB) and Master of Engineering in Landscape Studies (Tongji University)

**Application deadline:** 15 July (winter semester)

**Prerequisites:** Bachelor of Science degree in Geography, Spatial Planning (‘Raumplanung’) or familiar equivalent study programmes from Germany or other countries. Thorough knowledge of English.

**Fees:** RUB’s social fee €311,88 (per semester)

**Contact:** Prof. Dr. Harald Zepp. +49 234 32-23313, email: gi-research@rub.de

**More information:** www.geographie.rub.de/transformation-urbaner-landschaften

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**European Master’s Programme in Human Rights and Democratisation**

Institute of International Law of Peace and Armed Conflict

**Degree:** Master of Arts (joint degree)

**Next intake:** First Round Deadline: 15 January, Second Round Deadline: 15 March.

**Prerequisites:** university degree of a high standard in a field relevant to human rights, including disciplines of Law, Social Sciences and the Humanities and a minimum of 180 ECTS credits (Bachelor’s/general degree)

**Fees:** tuition fees €4900 (one-off payment), enrolment fee €150, application processing fee €50, RUB’s social fee €311,88 (per semester)

**Special feature:** first semester taught in Venice

**Contact:** Name Prof. Dr. Hans-Joachim Heintze, Email: Hans-Joachim.Heintze@rub.de

**More information:** www.emahumanrights.org
DOUBLE AND JOINT DEGREES

Several double and joint degree programmes provide the opportunity to profit from additional lectures offered by reputable partner institutions, to obtain the degree of a partner university alongside the RUB-degree without prolongation of the duration of your studies and to strengthen your intercultural competencies.

For a list of all double / joint degree programmes including recent changes please check www.international.rub.de/profil/lehre/doppelabschluss.html.en.

Double Master's Degree Germanistik with Universiteit van Amsterdam

Intercultural Master programme taught in German, starting in August. Strong focus on practical application. Students spend the first two semesters in Amsterdam and the third and fourth semester in Bochum.

Contact:
Name: Prof. Bernd Bastert
Email: bernd.bastert@rub.de
www.germanistik.rub.de/ambo/

Double Master’s Degree Option: “Comparative Literature” with Università di Bergamo

Students spend the first semester in Bochum, the second and the third semester in Bergamo and the last (fourth) semester again in Bochum. Upon successful completion of the studies, they will be awarded a Master's degree of both RUB and Università di Bergamo.

Contact:
Name: Dr. Peter Gossens
Email: peter.gossens@rub.de

Double Master’s Degree Development Management with University of the Western Cape, Capetown

International Master programme taught in English. Well performing and committed students who register for the MA in Development Management of Ruhr University Bochum have the possibility to obtain a second degree of our partner, the University of the Western Cape (UWC), South Africa, by submitting a second Master's thesis and successfully completing additional coursework. (For details, see programme website.)

Contact:
Name: Dr. Gabriele Baecker
Email: gabriele.baecker@rub.de
www.development-research.org/index.php/study-programmes/madm

Double Master's Degree in Gender Studies with the University of Graz

A double degree “Master of Arts” is awarded, a full academic degree in both participating countries. The degree course focuses on an international, mainly European, perspective on Gender Studies.

Contact:
Name: Maximiliane Brand
Email: GenderStudies@rub.de
Double Master’s Degree "Russian Culture" with RGGU in Moscow
Students of (Russian) Culture at the RGGU and at RUB obtain a Master degree of the RUB and of the RGGU after successfully completing their studies.

Contact:
Name: Dr. Klaus Waschik
Email: klaus.waschik@rub.de

Joint European Master’s Programme in International Humanitarian Action (NOHA)
See page 16 for further Information.

Double Master’s Degree in Management and/or Economics with UEA, Norwich
10 double degree places are offered for students of the Master of Economics or Master of Management and Economics. The second and third semester are spent in Norwich.

Contact:
Name: Prof. Dr. Michael Roos
Name: Christina Seeger
Email: Michael.Roos@rub.de
Email: Christina.Seeger@rub.de
www.wiwi.rub.de/international/doubleprogrammes/uea_double.html.en

Double Master’s degree in Transformation of Urban Landscapes (TUL)
See page 16 for further Information.

Double Master’s Degree for students of "Financial Services" at the CDHK at Tongji-University, Shanghai, with the Faculty of Economics
Students of the CDHK can continue their studies at RUB from the 4th semester onwards.

Contact:
Name: Prof. Dr. Bernhard Pellens
Email: pellens@iur.rub.de

Double Master’s Degree of the Faculty of Mechanical Engineering with the CDHK at Tongji University, Shanghai
A double degree in production techniques can be obtained by German and Chinese students (studying at both locations).

Contact:
Name: Prof. Dr.-Ing. Michael Abramovici
Email: Michael.Abramovici@itm.ruhr-uni-bochum.de

Double Bachelor’s Degree in History with Université François Rabelais Tours
The students study at their home university for two semesters, then change to the partner university for semesters 3 and 4. The 5th semester is spent in Tours by all students, the 6th in Bochum. Language of instruction in Tours is French.

Contact:
Name: Prof. Dr. Gerhard Lubich
Email: Gerhard.lubich@rub.de
Name: Dr. Jens Lieven
Email: jens.lieven@ruhr-uni-bochum.de
Double Master's Degree in History with Université François Rabelais Tours

Research oriented double degree programme. Students spend their first semester in Tours and their second semester in Bochum jointly as one cohort. They continue their studies in the third semester at the partner university (RUB students in Tours and vice versa) and the fourth semester at their home university. Language of instruction in Tours is French.

Contact:
Name: Prof. Dr. Gerhard Lubich
Email: Gerhard.lubich@rub.de
More information: www.rub.de/isg/informationen

Double Bachelor's / Master's Degree in National and European Law with Université François Rabelais Tours

Both double Bachelor's and double Master's degree. Students spend two semesters together in Bochum and two in Tours.

Contact:
Name: Prof. Dr. Adelheid Puttler
Email: dfbs-info@rub.de

Double Master’s Degree option in Philology (French Department) with Université François Rabelais Tours

Students of both partner universities can spend the last year of their studies at the partner institution. Students will be awarded a Master's degree of both RUB and Université Tours. Language of instruction in Tours is French.

Contact:
Name: Jürgen Niemeyer
Email: Juergen.Niemeyer@rub.de

Double Master's Degree option in Philology (Spanish Department) with Universidad de Oviedo

Students of both partner universities can spend the last year of their studies at the partner institution. Students will be awarded a Master’s degree of both RUB and Universidad de Oviedo.

Contact:
Name: Jürgen Niemeyer
Email: Juergen.Niemeyer@rub.de

European Master's Programme in Human Rights and Democratisation

See page 16 for further Information.
**Joint Master’s Degree Film and Audiovisual Media**

Integrated studies in three different European countries, at key media and media studies locations (Goethe-Universität Frankfurt, Université Sorbonne Nouvelle Paris 3, Université de Paris Ouest Nanterre Paris 10, Università degli Studi di Udine, Università Cattolica del Sacro Cuore di Milano, Université de Liège, Birkbeck College London, Universitat Pompeu Fabra de Barcelona, Université Lille 3, Università Roma 3, University of Amsterdam, Université de Montréal). Second and third semesters have to be spent at different partner universities.

**Contact:**
Name: Prof. Dr. Oliver Fahle  
Email: Oliver.Fahle@rub.de  
www.rub.de/ifm/studium/master-film-av.html

Name: Elisa Linseisen  
Email: elisa.linseisen@rub.de

**Double Master’s Degree: RUBSALA - Integrative Sprachdidaktik des Deutschen**

RUBSALA is a German and Swedish Double Master programme where you will learn intercultural language teaching of German. The Master is taught in German. Due to this Master the student will study at RUB and at Uppsala University in Sweden.

**Contacts:**
Name: Prof. Dr. Björn Rothstein  
Email: bjørn.rothstein@rub.de  
staff.germanistik.rub.de/rubsala/startseite/zum-studienaufbau/

Name: Judith Janutta  
Email: rubsala@rub.de
LANGUAGE COURSES

ZFA – CENTER FOR FOREIGN LANGUAGE TRAINING

a) Language Courses
The University Language Centre (Zentrum für Fremdsprachenausbildung, ZFA) provides courses aimed at specialist and non-specialist language learners, with a particular focus on the key attributes of developing cultural awareness and intercultural communicative competence in an academic setting. Classes take place during the semester and—in the form of intensive courses—during the semester break.

The University Language Centre currently offers classes for 15 different languages: Arabic, Chinese, Dutch, English, French, Italian, Japanese, Modern Greek, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish and Turkish.

More Information: www.rub.de/zfa

b) German as a Foreign Language
In addition to the language courses listed above, there are numerous offers for German as a Foreign Language. In addition to preparatory courses, many courses may be taken during the semester alongside regular studies. These courses are designed for the special needs of international students, PhD students and international researchers.

More information: www.daf.rub.de/index.html.en

c) Certification
In some of the courses for the languages listed above, there is the possibility to achieve special certificates:
TestDaF (Deutsch als Fremdsprache – German as a Foreign Language); UNIcert® (Arabic, English, French, Italian, Japanese, Norwegian, Polish, Russian, Swedish, Spanish, Turkish); DELE (Spanish); CNaVT (Dutch); Swedex and Tisus (Swedish); DELF/DALF (French); IELTS (English) and DAAD-language certificate.

d) Individual Learning
The University Language Centre also provides various opportunities for individual learning and offers support, guidance and individual assistance:
- Tandem (Two people with different native languages learn with and from each other in a systematic manner)
- Centre for self-organised learning
- Language-learning coaching

More information: hwww.rub.de/zfa/sgl/index

Bochum Institute of Intensive Language Training (LSI – Landesspracheninstitut)

This institute offers intensive language courses for Arabic, Chinese, Japanese and Russian, along with a smaller number of less intensive courses for Korean, Persian, Dari and Turkish.

For more Information, please visit: www.landesspracheninstitut-bochum.de
INTITUT FÜR DEUTSCHLANDFORSCHUNG

GERMANY AT A GLANCE – GERMANY AT ONE GLANCE

Content
The “Institut für Deutschlandforschung (IDF)” was founded 1989 as an interdisciplinary work
group for Germany and European studies at RUB.
The lecture Germany at a glance – Germany at one glance provides insight into German culture,
geography, history and everyday-life in Germany. It is structured as a lecture series with
prominent guest speakers dealing with subjects that range from historical approaches on
Germany’s past to religious festivities and geographical knowledge.
The lecture series is designed for international students and students with a refugee background
and it is taught in German with presentation slides written in English. It is open to Bachelor’s and
Master’s degree students.

Contact
The event is held by Dr. Frank Hoffmann
(Phone: 0234 32 - 2 78 63 E-Mail: frank.hoffmann-2@ruhr-uni-bochum.de)

Time and Place
Room: UFO 0/11 Day, Time: Thursday, 10 am – 12 pm Begin: 04/05/2017
APPLICATION AND ADMISSION

If you are coming to RUB as an exchange student, you have to apply for an exchange programme at your home university. You will find all of the required information at www.international.rub.de/gaststudis.

If you wish to complete a degree at RUB, you are very welcome to submit your application. Please note, however, that you have to fulfil certain criteria in order to be able to study at RUB:

Your higher education entrance qualification must be recognised as equivalent to the German qualification. Your higher education entrance qualification (Hochschulzugangsberechtigung, HZB) is your school leaving certificate or proof of studies already completed at secondary education level. To qualify for admission to RUB, you must be able to prove that you possess the equivalent of the German Abitur qualification, which is the examination taken at the end of your secondary education.

You will find more information regarding this topic at: www.international.rub.de/bewerbung/zulassung/hzb

Furthermore, you need sufficient German skills for most degree programmes. The international degree programmes listed in the first chapter of this brochure are an exception and these Programmes have individual application procedures. A high standard of German language skills are required for successful completion of a regular course at Ruhr-Universität Bochum. Language skills can be proven by presenting a certificate gained for passing one of the following examinations:

- DSH examination (level 2 or 3)
- ZOP examination or Goethe-Zertifikat C2 of the Goethe-Institut
- German language diploma, level II, of the Goethe-Institut
- TestDaF with the grades 4 x 4 or 16 points
- Degree in German philology.

You will find more information on this subject at www.international.rub.de/bewerbung/zulassung/deutschkenntnisse

Ruhr-Universität Bochum offers an online application system. Application procedure can differ, depending on the country you are coming from and the subject you are planning to study at RUB.

You will find all of the necessary information and the online application tool at www.international.rub.de/bewerbung

Please note the application deadlines at RUB:
Application period, winter semester: 01/06 - 15/07
Application period, summer semester: 01/12 - 15/01

International degree programmes may have their own deadlines and application procedures. For more information, check the chapter “International Master Programmes”
INTERNATIONAL SEMINARS AND LECTURES

The following chapter contains a compilation of seminars and lectures (Bachelor, Master and PhD) held in English.

Please note: These seminars and lectures are NOT necessarily part of an international degree programme.

In the short overview of each course, you will find further information about the requirements and the course descriptions of all offered courses. The name and email-address of the lecturer are attached as well so you will be able to contact him/her to ask if you can join the course or in case you need any special advice.

If you would like to find courses, which are open for refugees, please see our special course catalogue called “University without borders – Course Catalogue for refugees”. This catalogue can be found in the International Office as a hard copy or online: www.rub.de/uni-ohne-grenzen/index_en.
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The evolution of morality

**Language**: English

**Department**: Philosophy Department

**Contact**: Dr. Tobias Starzak; tobias.starzak@rub.de

**Degree programme**: Bachelor/Master/...

**Module**: WM IIc, IIIc

Module taught entirely in foreign language: Yes

**Course type**: Seminar

**Credit Points**: 4 / 6

**Teacher/Lecturer**: Dr. Tobias Starzak

**Room**

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**Course description:**

Moral thinking pervades our practical lives, but where does it come from? Is there an innate basis to human morality or is it a cultural phenomenon? Can we give a plausible evolutionary account of our sense of morality? What purpose does this sense of morality serve? What does that mean for the normative status of our moral judgments? Can this evolutionary perspective help to answer to moral skepticism? Or does an adaptive explanation of morality in terms of genetic success ("if it is just something that helped our ancestors make more babies", as Joyce writes) rather undermine morality’s central role in our life? In this seminar we’ll discuss these question on the basis of Richard Joyce’s 2005 book The evolution of morality. The language of the seminar is English.

**Proofs of academic achievement**: Oral examination/written examination/...

---

**Migration and Stability**

**Language**: English

**Department**: Philosophy Department

**Contact**: Martina Tomczak , Tel. 28719, martina.tomczak@rub.de

**Degree programme**: Bachelor/Master/...

**Module**: WM IIb, IIIb

Module taught entirely in foreign language: Yes

**Course type**: Seminar

**Credit Points**: 4 / 6

**Teacher/Lecturer**: Prof. Dr. Corinna Mieth

**Room**

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Course description:
The ethics of international migration are one of the most problematic field in contemporary political philosophy, possibly challenging fundamentally the way we think about nations, states and societies. One of the main questions of the ongoing debate is about the possible effects of migration on a liberal pluralist society confronted with multicultural migrants from less developed and/or non-liberal backgrounds. As national liberals and conservatives often defend the right to control borders and exclude people referring to destabilizing effects on the domestic societies, there is yet little theoretical and empirical knowledge for many of those claims and arguments. But also defenders of open borders lack a substantial account of stability and its normative implications.
In this seminar we will look at the different aspects of this complex problem. Starting with classical authors of political philosophy and their normative account of stability, we will move to contemporary arguments on the ethics of migration and also integrate empirical research on the issue. Finally we will try to elaborate on a notion of stability suitable for the ethics of migration. Questions that will be addressed are: What role does stability play in political philosophy and theory of the state? What does it mean to be a stable liberal society? Which dimensions (economical, cultural, political) of stability are of relevance? How does migration relate to stability? Which normative implications arise for migrants as well as receiving societies? What role does empirical knowledge play? How could a theory of stability improve the debate on international migration?

Proofs of academic achievement: Oral examination/written examination/...

Theories, Philosophy and Ethics of Risk

Language: English

Department: Philosophy Department
Contact: Dr. Joschka Haltaufderheide; joschka.haltaufderheide@rub.de
Degree programme: Bachelor/Master/...
Module: WM IIb, IIIb
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 4 / 6
Teacher/Lecturer: Dr. Joschka Haltaufderheide

Room Day, Time Begin
GA 03/46 Thursday 20/04/2017

Course description:
The seminar is part of the master's program "Ethics - Economics, Law, and Politics" and will therefore be taught in English. It may also be attended by students of the masters programs in philosophy and by advanced students in the bachelor degree course in philosophy. Even though risks are ubiquitous and many disciplines must deal with risk (one need only think of engineering or finance), we still do not possess a suitable ethics of risks. The main theories of normative ethics, i.e. utilitarianism and rights based moral theories, have great difficulties with justifying convincing criteria for acceptable risks. In the seminar we will try to pursue two main objectives. On the one hand we will try to get a better understanding of what risks are. For this we will ask how risks are understood and dealt with in philosophy, economics, the social sciences and
law. On the other hand we will try to get a better understanding of the problems of an ethics of risk. Here we will study different proposals to solve them and different attempts of an applied risk ethics.

At the beginning of the seminar, the texts of the seminar will be provided as a download.

Proofs of academic achievement: Oral examination/written examination/...

### Situated Cognition: The Nature and Location of Cognition

**Language:** English

**Department:** Philosophy Department

**Contact:** Sekretariat Prof. Newen, Tel. 28139, sekretariat-newen@rub.de

**Degree programme:** Bachelor/Master/...

**Module:** WM IIa, WM IIIa
Module taught entirely in foreign language: Yes

**Course type:** Seminar

**Credit Points:** 4 / 6

**Teacher/Lecturer:** Prof. Dr. Albert Newen

**Room**  
GABF 04/716  
**Day, Time**  
Monday  
**Begin**  
24/04/2017

**Course description:**
In this seminar, we will explore situated views of cognition. These are sometimes called ‘4E’ views, the four ‘E’s standing for ‘extended’, ‘embedded’, ‘embodied’, and ‘enactive’ - though in this course, we will focus primarily on the first three. Generally speaking, the situated view of cognition emphasizes the contribution of the environment and the nonneural body to cognitive processing. Situated theorists typically take exception to an image of the human mind as an isolated computer, an image commonly associated with the early days of cognitive science and pioneering work in artificial intelligence. Instead of a computer that is programmed to search systematically through a range of well-defined options, the situated theorist sees human cognitive achievements as the product of an ongoing dynamical dance, a messy multiplicity of real-time interactions between the brain, body, and world. This description of the situated approach is somewhat metaphorical, and thus we will spend much of the semester examining, and attempting to evaluate the import of, the more detailed philosophical and empirical claims associated with the situated view. We will be especially concerned with the ways in which situated approaches bear on claims regarding the nature and location of cognition itself. We will ask what kind of property ‘being cognitive’ is and what sorts of entities can be cognitive.

This seminar is closely related to the new Research Training Group for PhDs in Philosophy and Cognitive Science. It enables students to work out a master thesis in this research area which will be fostered at least for the next four and half years.

Proofs of academic achievement: Oral examination/written examination/...
Epistemic Logic

**Language:** English

**Department:** Philosophy Department

**Contact:** Dr. Pere Pardo Ventura; pere.pardoventura@ruhr-uni-bochum.de

**Degree programme:** Bachelor/Master/...

**Module:** WM IIa, WM IIIa

Module taught entirely in foreign language: Yes

**Course type:** Seminar

**Credit Points:** 4 / 6

**Teacher/Lecturer:** Dr. Pere Pardo Ventura

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**Course description:**

This course will offer an introduction to the modal logic(s) of knowledge for multiple agents, and study the interactions of knowledge with other notions like beliefs and actions (especially perception and communication).

If time permits, after these core topics we will present an overview of related topics: belief change, awareness, justification, etc.

Epistemic logic is an important branch of modal logic, with applications in philosophy, computer science (artificial intelligence, multi-agent systems) and cognitive science and psychology.

Inspired by Plato’s analysis of knowledge as "true, justified belief", epistemic logic typically focuses on the "true belief" part to analyze different scenarios. Using possible world semantics, this analysis leads to a simple notions of knowledge and belief whose logics (S5 and KD45, resp.) are considered standard in the area of computer science, but that have also been challenged on philosophical grounds, as failing to distinguish between sources of knowledge, or to account for the interaction between knowledge and belief in a satisfactory way. In the first part of the course, we will introduce these two standard logics and discuss these challenges and possible solutions.

The aim of epistemic logic is to represent and reason about the knowledge that agents have about the world (e.g. "I know it rains") and also about each other’s knowledge (e.g. "I know that you know that I know it rains"). Using relational structures, the knowledge of an agent is in fact encoded by the different possibilities considered by this agent at/about the present time. One can thus see epistemic logic as describing the knowledge that obtains in a given static scenario. If this logic is extended with a dynamic component for actions or events, one can also represent and reason about the knowledge that an agent will have in the future, after some events take place or some actions are executed. To this end, in the second part of this course, we will introduce dynamic epistemic logic, which extends the epistemic representations from states to actions (action models), and uses them to update the agents’ knowledge before the action into their knowledge after the action.

**Proofs of academic achievement:** Oral examination/written examination/...
The Philosophy of Memory

**Department**: Philosophy Department  
**Contact**: Prof. Dr. Markus Werning, markus.werning@rub.de  
**Degree programme**: Bachelor/Master/...  
**Module**: WM IIc, WM IIIc  
**Module taught entirely in foreign language**: Yes  
**Course type**: Seminar  
**Credit Points**: 4 / 6  
**Teacher/Lecturer**: Prof. Dr. Markus Werning

**Room**  
**Day, Time**  
**Begin**

GA 04/187  
Wed  
19/04/2017

**Course description:**
In the most general way of speaking, people use the noun "memory" to refer to instances where information of the past is made available for present purposes. Making available information of the past for present purposes is also the function of certain psychological states of humans and animals that we refer to by the noun "memory". Memory has an inherent epistemological status as a source of knowledge as well as particular phenomenological quality as a certain form of re-experiences. It seem to be a mental time travel into the past. In the seminar we will discuss recent philosophical approaches to memory, dive into the history of the philosophy of memory and relate the philosophical accounts to psychological and neuroscientific research. We will also ask how to taxonomize the domain of memories and if memory is a natural kind.  
Aside from active participation, participants will be expected to give a presentation in English. Assistance regarding the English language will be provided.

**Proofs of academic achievement**: Oral examination/written examination/...

Negation and Negativity in Natural Language

**Department**: Philosophy Department  
**Contact**: Prof. Dr. Markus Werning, markus.werning@rub.de  
**Degree programme**: Bachelor/Master/...  
**Module**: WM IIc, WM IIIc  
**Module taught entirely in foreign language**: Yes  
**Course type**: Seminar  
**Credit Points**: 4 / 6  
**Teacher/Lecturer**: Prof. Dr. Markus Werning

**Room**  
**Day, Time**  
**Begin**

GA 04/187  
26.-30.04.17, 10-16  
18/10/2013

**Course description:**
Negation and negativity are key features of human languages. While negation is a phenomenon of semantic opposition, negativity addresses a broader spectrum of phenomena. The investigation of the form and meaning of negation and negativity in natural language is at the heart of many debates in philosophy, linguistics, logic and psychology. It has been observed that sentences containing a negation are harder to process than affirmative sentences. This raises the question of how the meaning of negative sentences is composed and how negation and negative concepts are mentally represented. The standard theory of linguistic understanding and of meaning in the area of philosophy, linguistics and cognitive sciences has been shaped by Jerry Fodor’s notion of a Language of Thought: linguistic meaning and understanding is anchored in an internal language-like structure which allows for amodal, symbol-based information processing. This view is challenged by the embodied emulative view of linguistic meaning and understanding. Negation provides an interesting test case for the investigation and comparison of both theories. The aim of the block seminar is to discuss various aspects of negation and its use in natural language from an interdisciplinary point of view. The core features of the two linguistic theories will be introduced. We will consider empirical data investigating the comprehension of negative sentences. Before entering into empirical research an introduction to the methods used in the selected papers will be given.

As part of the class we will host a workshop with a number of renowned international scholars, including among others Rachel Giora (Tel Aviv University), Laurence Horn (Yale University), Barbara Kaup (University Tübingen), and João Marcos (Federal University of Rio Grande do Norte).

Aside from active participation, participants will be expected to give a presentation in English. Students are requested to attend the pre-meeting for assigning topics of student presentations on 10 April at 15:15 in GA 04/43. More information about the workshop can be found at http://www.ruhr-uni-bochum.de/phil-lang/Negation.html.

Proofs of academic achievement: Oral examination/written examination/…
the political liberalism, international law, and last but not least, methodology of practical justification has been highly influential as well. This introductory course aims to give an overview on Rawls' political philosophy as a whole taking his A Theory of Justice (1971), Political Liberalism (1993), The Law of Peoples (1999), and Justice as Fairness. A Restatement (2001) into account.

Proofs of academic achievement: Oral examination/written examination/…

**Experimental Philosophy of Morality**

**Department:** Philosophy Department  
**Contact:** Sekretariat Prof. Newen, Tel. 28139, sekretariat-newen@rub.de  
**Degree programme:** Bachelor/Master/…  
**Module:** WM IIb, WM IIIb  
Module taught entirely in foreign language: Yes  
**Course type:** Seminar  
**Credit Points:** 4 / 6  
**Teacher/Lecturer:** M.A. Karolina Prochownik, M.Sc. Pascale Willemsen  
**Room**  
GABF 04/714  
**Day, Time**  
Thursday, 14-16  
**Begin**  
27/04/2017  

**Course description:**

In the last two decades, moral philosophy has been subject of increasing interest from researchers in psychology, anthropology, sociology, and other related fields. This research yielded surprising results about how people actually make moral judgments, which sometimes stand in sharp conflict to normative philosophical accounts. However, to adequately engage with such presumably challenging evidence, philosophers need to be enabled to understand and critically evaluate empirical papers. The aim of this seminar is to provide advanced bachelor and master students with the necessary tools to do so, starting from experimental design and moving on to statistical analyses and interpretation of those analyses. A variety of papers in moral psychology will provide examples of how empirical research has been used to achieve philosophical progress. In addition, we will contrast those papers with critical reviews that claim to have identified serious methodological flaws that render the results questionable.

As an alternative to classical philosophy essays, students will be given a chance to write an empirical essay in which they conduct own text-based experiments on a clearly defined philosophical question.

Proofs of academic achievement: Oral examination/written examination/…
Plotinus on Virtue and Dialectic

Language: English

Department: Philosophy Department

Contact: Claudia Smart, Tel. 28721

Degree programme: Bachelor/Master/...

Module: WM IIIa

Module taught entirely in foreign language: Yes

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. James Wilberding

Room: GABF 04/354

Day, Time: Tuesday

Begin: 18/04/2017

Course description:
In this seminar, we shall be subjecting two short, chronologically and thematically connected treatises by the founder of Neoplatonism to a close study: Ennead I.2 On Virtues and Ennead I.3 On Dialectic. The former treatise effectively offers a commentary on Plato's famous exhortation in the dialogue Theaetetus (176a) that we should seek to become like God. This provides Plotinus the opportunity to outline his ladder of virtues, which allows him to harmonize many of Plato's diverse statements about the virtues in his various dialogues. This project appears to be continued in Ennead I.3, where Plotinus examines the nature and role of dialectic in this project of becoming like God. No knowledge of ancient Greek is required, but the Greek text will be discussed at times. The primary language for this seminar is English, but some discussion in German is bound to take place. Every participant will be expected to lead the discussion for one session. All who are interested in attending this seminar should have read both treatises carefully at least once prior to the beginning of the semester. We will be looking at various translations in the seminar, but for the purposes of preparation I recommend reading the translations by A.H. Armstrong in the Loeb series, which I shall attempt to make available via Moodle a few weeks...

Formal Argumentation

Language: English

Department: Philosophie II

Contact: Jesse Heyninck, 0234/3228714, jesse.heyninck@rub.de

Degree programme: Bachelor Philosophy and Educatational Science/MA Cognitive Science, NF Mathematik

Module: Formal Argumentation

Module taught entirely in foreign language: Yes

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Jesse Heyninck
Course description:
In many contexts, people accept inferences that are not completely reliable: the truth of the premises might be only probable or the inference from the premises to the conclusions might be less than truth-preserving. Standard classical logic can be viewed as being confined to the study of fully reliable inferences. This difference between classical logic and actual reasoning as observed in real life has been criticized and studied by argumentation theorists such as Chaim Perelman, Lucie Olbrechts-Tyteca and Stephen Toulmin. They proposed to study reasoning from an argumentative perspective: what makes propositions acceptable is not the fact that they are supported by a fully reliable inference but, the fact that they are defensible from counterarguments. This perspective was further, developed into a formal model by the research field known as formal argumentation. In this course, we will take a look at the shortcomings of classical logic to model real life reasoning and look at the alternatives as developed by the formal argumentation community. We will look at various argumentation formalisms and compare them with classical logic. Furthermore, we will look at how formal argumentation has been applied to model dialogues, between arguing agents, persuasion, decision making and reasoning with norms.

Proofs of academic achievement: Oral examination/written examination/ essay

This course is credited for „Optionalbereich“. 
Apart from few exceptions all courses offered by the English Department are taught in English.

The different courses cover topics from the fields of American Cultural Studies, British Cultural Studies, American Literature, British Literature and Linguistics.

Courses which could be particularly useful and interesting for exchange students are also provided in the modules Language Practice (i.e. Translation, Communication, Grammar) and English for Special Purposes (i.e. Legal English, Business English, Technical English).

A complete list can be found on the departmental homepage: http://www.es.rub.de/vorlesungsverzeichnis.html

Contact Information:

Geschäftszimmer GB 6/133
Mon-Fri: 8:30am – 12:30pm
Phone: 0234/32-22589
Email: anglistik@rub.de
INSTITUTE OF MEDIA SCIENCES

Let’s talk about sex! Talking and Filming Sex in Contemporary Film

Language: English

Department: Institut für Medienwissenschaft
Contact: Peter Vignold, peter.vignold@rub.de 32-29358
Degree programme: BA
Module: Gegenstandsmodule: Film/Kino
Systematisches Modul: Gender (TEILVERANSTALTUNG)

Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 3CP
Teacher/Lecturer: Rebecca Kaplan, M.A.

Room
Day, Time
Begin
2st., Do 12-14, GABF 04/611
Do 12-14
20/04/2017

Course description:
In this course, we will explore how films talk about and visualize sex in contemporary cinema. While the focus will be on American fiction films, which are narratively structured around sex or sexuality, we will also explore European cinema and documentaries about porn, prostitution and penis size. Texts, readings, and discussions will be in English.

This course is credited for „Optionalbereich“.

Social Media and child protection

Language: English

Department: Institut für Medienwissenschaft
Contact: Peter Vignold, peter.vignold@rub.de 32-29358
Degree programme: BA
Module: Gegenstandsmodul: Digitale Medien
Systematisches Modul: Mediensysteme (beides TEILVERANSTALTUNG)
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 3CP
Teacher/Lecturer: Rahim Benrazavi

Room
Day, Time
Begin
2st., Mo 14-16, GABF 04/611
Day, Time
24/04/2017
Course description:
This course provides students with a broad approach to the potential threats of the Internet and social media as well as history, theory, technology, impact, and strategies for preventing such threats. Students will learn the nature and effects of each threat and explore the possibilities of prevention practices as well as methods to help the victims out.

This course is credited for „Optionalbereich“.

, von hier aus’ III, BIGGER THAN LIFE, Programmieren und Realisieren einer Filmreihe

Language: English

Department: Institut für Medienwissenschaft
Contact: 32-27812, hilde.hoffmann@ruhr-uni-bochum.de

Degree programme: BA
Module: -
Module taught entirely in foreign language: Yes

Course type: Praxis
Credit Points: 3CP
Teacher/Lecturer: Dr. Hilde Hoffmann

Room Day, Time Begin
4st., Mo 16-20, Day, Time 24/04/2017
Endstation Kino

Course description:

Engagement und die Möglichkeit Montags regelmäßig schon um 15.45 Uhr in Langendreer zu sein ist Voraussetzung zur Teilnahme.
Das Seminar ist offen für Geflüchtete, die mit dem Studium beginnen oder ihr Studium baldmöglichst wieder aufnehmen wollen.

Proofs of academic achievement: -
This course is credited for „Optionalbereich“.

**ANIMATION WRITING: "You're in Charge"**

**Language:** English

**Department:** s.o.
**Contact:** s.o.
**Degree programme:** BA
**Module:** Praxis (TEILVERANSTALTUNG)
**Module taught entirely in foreign language:** Yes
**Course type:** Blockseminar
**Credit Points:** 3CP
**Teacher/Lecturer:** James Magon

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<tr>
<td>GA1/153</td>
<td>15.07.2017 10:00h - 17:00h</td>
<td>18/10/2013</td>
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<td>16.07.2017 10:00h - 17:00h</td>
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<td>21.07.2017 10:00h - 17:00h</td>
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**Course description:**
This four-day intensive study offers students a step-by-step curriculum for creating, writing and selling animation scripts. The class includes all the "toon" essentials: Comedy timing, character development, stage directions, falling anvils, & more. (Lectures and videos. Plus a minor writing assignment.) No prior scriptwriting experience is required.

**Proofs of academic achievement:** -

This course is credited for „Optionalbereich“.
International News Flow to Africa: Globalisation versus Neo-imperialism

Language: English

Department: s.o.

Contact: s.o.

Degree programme: BA

Module: Systematisches Modul Mediensysteme / Gegenstandsmodul Digitale Medien (Teilveranstaltung)

Module taught entirely in foreign language: Yes

Course type: Seminar

Credit Points: 3CP

Teacher/Lecturer: Michael Serwornoo

Room GABF04/611

Day, Time Tuesday 14-16

Begin 18/04/2017

Course description:
It is my aim in this course to provide students with an understanding of the evolving nature of international news flows and how this has contributed to the unending global debate of news production and dissemination around the world. The analyses shall cover the UNESCO’s contributions in the form of McBride and Sreberny reports. The contemporary debate that news flow across the world, through modern technologies, is an evidence of globalisation will be interrogated with an interventionist perspective.

These questions are fundamental to the seminar: What is the relevance of the New World Information Order debate today? How do we define contemporary international news flow in a world of unequal encounters? Is the international news flow field an open or closed place for key players and why? What has happened to Afro-pessimism under hegemonic conditions? How has Western dominance of International news flow evolved on to the African continent?

Proofs of academic achievement: Oral examination/written examination/...

Be prepared for seminars; have readings and assignments done on time

Spend time outside of seminar working on readings, projects, and correspondence

Participate in active learning inside and outside of seminar (in other words, both on-line and face-to-face). That means asking questions, helping classmates answer questions, and working with one another to solve problems.

Be at the seminar. It is the time we mostly will have to work face-to-face.

This course is credited for „Optionalbereich“.
INSTITUTE OF ORIENTAL AND ISLAMIC STUDIES

Islamic Mysticism (050112)

Language: English/German

Department: Institute of Oriental and Islamic Studies
Contact: Dr. Reza Pourjavady, GB 2/137, 32-26234, reza.pourjavady@rub.de
Degree programme: Bachelor/Master/...
Module taught entirely in foreign language: No
Course type: Proseminar / Exercise course
Credit Points: Exercise course: 2 / Proseminar 3 + 3
Teacher/Lecturer: Dr. Reza Pourjavady
Requirements: At least Arabic I and knowledge of Arabic transcription rules

Room: GB 2/131
Day, Time: Wednesday, 10 – 12 a.m.
Begin: 26/04/2017

Course description:
The course focuses on the formation of Sufism in the 9th century in Baghdad and in Khurāsān and its further development throughout history. It will introduce the main figures, trends, doctrines, concepts and practices of Sufism. Attention will be given to some of the controversies and debates that surrounded specific figures, doctrines and practices, and the Sufi tradition as a whole. The main concern of the course is to foster an understanding of the mystical perspectives that have influenced much of the Muslim population of the world.
Introductory literature:

Proofs of academic achievement: Oral examination/written examination/...

Introduction to Shi’Islam (050110)

Language: English / German

Department: Institute of Oriental and Islamic Studies
Contact: Dr. Reza Pourjavady, GB 2/137, 32-26234, reza.pourjavady@rub.de
Degree programme: Bachelor/Master/...
Module taught entirely in foreign language: No
Course type: Proseminar/Exercise Course
Credit Points: Exercise Course: 2 / Proseminar 3 +3
Teacher/Lecturer: Dr. Reza Pourjavady
Requirements: At least Arabic I and knowledge of the Arabic transcription rules
Course description:
The dispute over the identity of the successor to Muhammad formed a distinct sect of Islam which is called Shi’a. Gradually a separate intellectual tradition emerged with its own distinctive doctrines. This course will examine the formation of Shi’i Islam and its various branches. Moreover, it deals with early modern and modern developments in Shi’ism. How Shi’i traditional institutions of theology and learning were transformed in this period, internal debates and the activities of Shi’i dissidents, and its ideological and political developments in the 20th century will be discussed.

Introductory Literature:

Proofs of academic achievement: Oral examination/written examination/…

Islam vs. Christianity: Interreligious Debates and Polemics in Iran and India from the 16th to the 19th century (050106)

Language: English/German

Department: Institute of Oriental and Islamic Studies
Contact: Dr. Reza Pourjavady, GB 2/137, 26234, reza.pourjavady@rub.de
Degree programme: Bachelor/Master/…
Module taught entirely in foreign language: No
Course type: Advanced Seminar
Credit Points: 4 + 4
Teacher/Lecturer: Dr. Reza Pourjavady

Requirements: At least Arabic III and/or Persian (min. Persian II). Readiness to prepare and report a seminar paper.

Room
Day, Time
Begin
GB 2/131
Tuesday, 12 – 14
25/04/2017

Course description:
From the second half of the 16th century a new phase of Christian missionary activities started in the eastern lands of Islam, namely in India and Iran. This course consists of two parts. In the first part we are going to review the interreligious debates took place between Muslim scholars and Catholic missionaries at the Mughal court of Akbar and Jahangir and their repercussions in Iran during the Safavid period. In the second part of the class, we are going to deal with the Protestant missionaries who came to the region in the 19th century and the subsequent exchange of interreligious polemical writings in this period.

Introductory literature:


Proofs of academic achievement: Oral examination/written examination/…

Religion and Philosophy from the 16th to the 18th Century in Iran (050107)

Language: English/German

Department: Institute of Oriental and Islamic Studies

Contact: Dr. Reza Pourjavady, GB 2/137, 26234, reza.pourjavady@rub.de

Degree programme: Bachelor/Master/…

Module: B.A./M.A. Modules I-1, I-2, O
Module taught entirely in foreign language: No

Course type: Advanced Seminar

Credit Points: 4 + 4

Teacher/Lecturer: Dr. Reza Pourjavady

Requirements: At least Arabic III and/or Persian II, readiness to prepare and report a seminar paper

Room

GB 2/131

Day, Time

Wednesday, 14 - 16

Begin

26/04/2017

Course description:


Proofs of academic achievement: Oral examination/written examination/…
INSTITUTE OF ROMANCE STUDIES

050940: TRANSLATION (FROM GERMAN TO FRENCH) FOR B.A. STUDENTS

Language: German/French

Department: Institute for romance languages
Contact: gzromsem@rub.de
Degree programme: Bachelor
Module: Foreign language training III (Fremdsprachenausbildung III)
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 4
Teacher/Lecturer: Dr. B. Portier-Weber
Requirements: French Level B1 or superior

Room
Day, Time
Begin
GB 8/138
Monday, 14.00-15.30 h
24/04/2017

Course description:
Translation of both narrative and informative texts from German into French

Proofs of academic achievement: Written examination
This course is open for refugees taking part in preparatory courses.

050956: TRANSLATION (FROM GERMAN INTO FRENCH) FOR MASTER STUDENTS

Language: French

Department: Institute for romance Languages
Contact: gzromsem@rub.de
Degree programme: Master
Module: Foreign language training M.A.
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 4
Teacher/Lecturer: Dr. B. Portier-Weber
Requirements: French Level B2 or superior

Room
Day, Time
Begin
GB 8/138
Mondays, 10.00-11.30 h
24/04/2017

Course description:
Translation from German into French language, advanced degree.

Proofs of academic achievement: Written Examination
This course is open for refugees taking part in preparatory courses.
FACULTY OF LAW

Introduction to American Law

Language: English

Department: Faculty of Law – Zentrum für Internationales
Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681
Degree programme: Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3 CP (5ECTS)
Teacher/Lecturer: Dr. Judit Beke-Martos, LL.M., PhD.
Requirements: Proficiency in English

Room
HGC 20

Day, Time
Wednesday, 16:00-18:00

Begin
26/04/2017

Course description:
This course is a basic introduction to the law and legal system of the United States in English. It covers the basic characteristics of the common law system, the doctrine of stare decisis, sources of law in the United States, the U.S. court system (both state and federal), the jury system, parties to a lawsuit, basics of the adversary system of trial, pleadings and motions, pretrial discovery, the trial process, case briefs and citations. This course is a core course in the Certificate Program of the Legal Faculty.

The course is though a lecture, some participation is expected.

Proofs of academic achievement: Obligatory Attendance and Written Exam
This course is credited for „Optionalbereich“.

U.S. Constitutional Law II: Fundamental Rights

Language: English

Department: Faculty of Law – Zentrum für Internationales
Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681
Degree programme: Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3 CP (5ECTS)
Teacher/Lecturer: Dr. Judit Beke-Martos, LL.M., PhD.

Requirements: Proficiency in English

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<tr>
<td>HGC 30</td>
<td>Wednesday, 12:00-14:00</td>
<td>26/04/2017</td>
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Course description:
This course is an introduction to certain fundamental rights of the American legal system through the Bill of Rights and the adjudication of the United States Supreme Court. Students will be taught how to read and brief cases through selected excerpts of landmark decisions. Issues include judicial review, the right to privacy, the right to bear arms, freedom of religion, the death penalty as well as same-sex marriage. This course is a core course for the Certificate Program of the Legal Faculty.

The course is though a lecture, some participation is expected.

Proofs of academic achievement: Obligatory Attendance and Written Exam

This course is credited for „Optionalbereich“.

U.S. Tort Law

Language: English

Department: Faculty of Law – Lehrstuhl Prof. Dr. Schubert / Zentrum für Internationales
Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681
Degree programme: State Exam – Law / Certificate Program, Faculty of Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3CP (5ECTS)
Teacher/Lecturer: Dr. Laura Schmitt, LL.M.
Requirements: Proficiency in English

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<tr>
<td>GC 8/131</td>
<td>Tuesday, 16:00-18:00</td>
<td>25/04/2017</td>
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Course description:
This course provides a general introduction to the law of torts. It covers laws that determine the conditions under which someone might be held legally responsible for having caused harm to another person or another person’s property under civil law. We will study American tort law with a special emphasis on intentional torts (e.g. trespass, assault and battery) and negligence. Further, we will discuss the rationale behind judgments in civil cases. Treating the need for victim compensation as a societal problem, the course will deal with alternatives to the tort system such as no-fault. Throughout the course, there will be an effort to identify the basic purposes, which a
tort system achieves or should achieve. Topics include intentional and unintentional injury; fault and no-fault theories of liability; causation; compensatory and punitive damages; affirmative defenses and other limitations of liability; vicarious and strict liability.

This course is a lecture. Nonetheless, student participation in the debates and preparation of parts of the cases is essential. Required reading will be provided.

This course is an elective course in the Certificate Program of the Legal Faculty.

Proofs of academic achievement: Obligatory Attendance, Active Participation and an Oral Presentation or Written Case Brief

U.S. Contract Law

Language: English

Department: Faculty of Law – Zentrum für Internationales

Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681

Degree programme: State Exam – Law / Certificate Program, Faculty of Law

Module: -
Module taught entirely in foreign language: Yes

Course type: Lecture

Credit Points: 3CP (5ECTS)

Teacher/Lecturer: Alexander O’Connolly, LL.M.

Requirements: Proficiency in English

Room |
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GC 8/131

Day, Time |
--- |
Friday, 12.05.2017 09:00 – 16:00
Saturday, 13.05.2017 09:00 – 16:00
Friday, 30.06.2017 09:00 – 16:00
Saturday, 01.07.2017 09:00 – 16:00

Course description:
U.S. Contract Law introduces law students to American contract law. The course will cover basic contract law concepts (including offer and acceptance, mistake, problems of proof; function of consideration; conditions; assignments; third-party beneficiaries and effect of changed circumstances) as well as legal remedies of contracting parties, including damages in contract and quasicontract, specific performance, reformation and rescission. Students will be expected to participate, read and discuss selected cases. Required reading will be provided.

Proofs of academic achievement: Obligatory Attendance and Optional Exam

Law and Economics

Language: English

Department: Faculty of Law – Lehrstuhl Prof. Dr. Magen

Contact: Prof. Dr. Magen, ls-magen@rub.de, 0234 32 29640

Degree programme: Bachelor/Master/State Exam - Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3 CP (5ECTS)
Teacher/Lecturer: Prof. Dr. Stefan Magen
Requirements: Proficiency in English

Room | Day, Time | Begin
--- | --- | ---
GC 03/142 | Tuesday, 08:00-10:00 | 18/04/2017

Course description:
This course covers the following topics: price theory, game theory, coase, remedies, intellectual property, strict liability, negligence, enforcement, market imperfections, social choice as well as behavioral law and economics.

Proofs of academic achievement: Written Exam (in English or German)

This course is credited for „Optionalbereich“. 

This course is open for refugees taking part in preparatory courses.

Law and Global Challenges

Language: English

Department: Faculty of Law – Lehrstuhl Prof. Dr. Kaltenborn
Contact: Prof. Dr. Kaltenborn, LS-Kaltenborn@rub.de, 0234 32 25252
Degree programme: Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Colloquium/Lecture
Credit Points: 3 CP
Teacher/Lecturer: Prof. Dr. Markus Kaltenborn
Requirements: Reliable Knowledge of English

Room | Day, Time | Begin
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GC 03/142 | Wednesday, 12:00-14:00 | 19/04/2017

Course description:
This course focuses on global challenges in light of public international law. Maintaining peace, fighting terrorism, climate change, human rights, refugee crises, politics of developing countries, rule of law, world trade, international organizations are just a few of the topics up for discussion.

This course is an elective course in the Certificate Program of the Legal Faculty.

Proofs of academic achievement: Active Participation and English-language Presentation
Critical Perspectives on Corrections in the United States

**Language:** English

**Department:** Faculty of Law – Lehrstuhl Prof. Dr. Feltes / Zentrum für Internationales

**Contact:** Dr. Judit Beke-Martos, LL.M., PhD., judit.beke-martos@rub.de, 0234 32 27681

**Degree programme:** Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law

**Module:** Yes

**Course type:** Lecture

**Credit Points:** 3CP (5ECTS)

**Teacher/Lecturer:** Prof. Dr. Jeffrey Ian Ross

**Requirements:** Proficiency in English

**Room**

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<td>Monday, 10.04.2017</td>
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<td>Tuesday, 11.04.2017</td>
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<td>Wednesday, 12.04.2017</td>
<td>09:00 – 16:00</td>
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<tr>
<td>Thursday, 13.04.2017</td>
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**Course description:**

The purpose of this course is to introduce students to the major problems facing contemporary corrections in the United States and the solutions offered in the field.

At the end of this course, students should be able to integrate and apply analytical skills and substantive knowledge to the selection of important problems facing the field of corrections in the United States, review solutions that have been proposed or implemented to alleviate those challenges, and suggest realistic alternative remedies to the problems. Included in this array of topics are a focus on the prominence of ethnography as a research tool, the unique contribution of the Convict Criminology approach to understanding corrections, and a focus on correctional officer deviance.

Reading material will be made available.

**Proofs of academic achievement:** Obligatory Attendance and Optional Exam

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**International Legal Dialogue**

**Language:** English and German

**Department:** Faculty of Law – Lehrstuhl Prof. Dr. Windel

**Contact:** Prof. Dr. Windel, zpo@rub.de, 0234 32 28839

**Degree programme:** Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law

**Module:** International Legal Dialogue

**Course type:** Colloquium/Seminar

**Credit Points:** 3 CP for Colloquium / 9 CP for Presentation
Teacher/Lecturer: Prof. Dr. Peter A. Windel

Requirements: Knowledge and skills in either German or at least one foreign law

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<td>GC 03/49</td>
<td>Thursday, 14:00 – 17:00</td>
<td>27/04/2017</td>
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<td>Plus additional particular German-Taiwanese Legal Dialogue, 03.07.2017, 14:00-18:00, GC 03/49</td>
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Course description:
Students will discuss about legal questions that go along with globalization. In the context of a moderated colloquium presentations of foreign visiting lecturers and Student Video Conferences with foreign partner faculties will be integrated.

This course is also an elective course in the Certificate Program of the Legal Faculty.

Proofs of academic achievement: Possibility of own presentation

This course is open for refugees taking part in preparatory courses.

International Dimensions of Law

Language: English

Department: Facultly of Law – Zentrum für Internationales; Lehrstuhl Prof. Dr. Schaub
Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681
Degree programme: Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law
Module: Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3CP (5ECTS)
Teacher/Lecturer: Dr. Thomas Thiede, LL.B., LL.M.

Requirements: Proficiency in English

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<td>HGC 20</td>
<td>Tuesday, 06.06.2017</td>
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<td>Wednesday, 07.06.2017</td>
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<td>Thursday, 08.06.2017</td>
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Course description:
Aims & Intended Outcomes: As indicated by its title, this course will focus on an introduction to Comparative Law, Conflict of Laws, European Law and Public International Law (with a focus on all questions of the law applicable (choice of law) in cases with a foreign element). Participants should obtain basic knowledge in Comparative Law, Conflict of Laws, European Law and Public International Law; understanding of problems in mentioned areas of law and (some) competence in questions of the law applicable in cases with a foreign element.
Previous knowledge expected: Instruction and assessment will be exclusively in English, and participants should have an appropriate level of linguistic competence.

Proofs of academic achievement: Obligatory Attendance and Written Exam

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Introduction to International Economic Law

Language: English

Department: Faculty of Law – Lehrstuhl Prof. Dr. Magen
Contact: Dr. Rike Krämer-Hoppe, Rike.Kraemer@rub.de, 0234 32 28265
Degree programme: State Exam – Law / Certificate Program, Faculty of Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 3CP (SECTS)
Teacher/Lecturer: Dr. Rike Krämer-Hoppe
Requirements: Proficiency in English

Room Day, Time Begin
GC 8/131 Thursday, 16:00-18:00 20/04/2017

Course description:
This course is aimed at introducing the students into the main topics of global economic governance. The course will focus on the general issues of international economic law especially the law of the World Trade Organisation (WTO). We will start by addressing the economic aspects of international trade, followed by an overview of the historical foundations of the WTO and the Dispute Settlement System within it. In the main part of the course, you will be introduced to different WTO agreements (GATT, TBT, SPS, SCM and GPA). Each of this introduction will be followed by a discussion of a case, for example the WTO EC Hormones Case, the Tuna Dolphin case as well as the Asbestos Case. Each student will present one case. Student participation in the debates is essential for the realisation of the objectives of the course. If you require a certificate according to § 7 Abs. 1 Nr. 3 JAG NRW a written assignment of 1500 words is requested.


Proofs of academic achievement: Obligatory Attendance and Paper

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
International Human Rights Law

**Language:** English

**Department:** Faculty of Law – Lehrstuhl Prof. Dr. Puttler / Zentrum für Internationales

**Contact:** Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681

**Degree programme:** State Exam – Law / Certificate Program, Faculty of Law

**Module:** -

**Course taught entirely in foreign language:** Yes

**Course type:** Lecture

**Credit Points:** 3 CP (5 ECTS)

**Teacher/Lecturer:** Isabella Risini, LL.M.

**Requirements:** Proficiency in English

**Room**

GC 03/142

**Day, Time**

Thursday, 12:00 – 14:00

**Begin**

27/04/2017

**Course description:**

International Human Rights Law as it stands today provides for rules for States with respect to how they treat individuals under their jurisdiction, including their own citizens. The course provides an introduction to International Human Rights Law. First, the inception and development of International Human Rights Law is retraced. The implementation mechanisms for International Human Rights Law are revisited and evaluated, covering the United Nations, regional institutions as well as domestic courts.

The course will take up current issues of International Human Rights law and aims at critical reflection of the body of law, its implementation mechanisms as well as its limitations. The course seeks to take a critical look at the field through engagement with the relevant literature as well as selected case law.

The successful completion of the course (in order to acquire the certificate according to § 7 Abs. 1 Nr. 3 JAG NRW) requires both the active participation in the coursework during the semester as well as a take-home exam with a word limit of 1.500 words.

Reading material will be made available.

**Proofs of academic achievement:** Obligatory Attendance and Optional Exam

This course is open for refugees taking part in preparatory courses.

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Summer School: State & Governance in a Historical Comparative Context

**Language:** English

**Department:** Faculty of Law – Zentrum für Internationales

**Contact:** Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681

**Degree programme:** Bachelor/Master/State Exam – Law / Certificate Program, Faculty of Law

**Module:** -

**Course taught entirely in foreign language:** Yes

**Course type:** Summer School, August 20-27, 2017, in Budapest, Hungary.

**Credit Points:** 3 CP (5 ECTS)

**Teacher/Lecturer:** Dr. Judit Beke-Martos, LL.M., PhD, Dr. Zsuzsanna Peres, PhD.
Requirements: Proficiency in English

Room: At the National University of Public Service in Budapest, Hungary
Begin: 18/10/2013

Course description:
The Summer School is the result of the academic cooperation between the National University of Public Service in Budapest, Hungary and the Legal Faculty of the Ruhr University Bochum. The course offered in English during this one-week summer school is one focusing on constitutional history, legal history and the legal development of the public administration in various common law and European models. The course is of comparative nature and requires active participation from all students. The 10 participants will be selected by the Center for International Affairs | Law from those applying through eCampus. For more information, please visit the website of the ZfI.

Proofs of academic achievement: Obligatory Attendance and Examination

This course is credited for „Optionalbereich“.

Einführung in das türkische Strafrecht (Türk Ceza Hukukuna Giris)

Language: Turkish

Department: Faculty of Law – Zentrum für Internationales, Lehrstuhl Prof. Dr. Wolters
Contact: Dr. Judit Beke-Martos, LL.M., PhD., Judit.Beke-Martos@rub.de, 0234 32 27681
Degree programme: State Exam - Law
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 3 CP (5 ECTS)
Teacher/Lecturer: Jun.-Prof. Dr. Özdem Özaydin

Requirements: Proficiency in Turkish

Room: BF 8.17
Day, Time: Friday, 23.06.2017 13:00 – 18:00
Friday, 30.06.2017 13:00 – 18:00
Friday, 07.07.2017 13:00 – 18:00
Friday, 14.07.2017 13:00 – 18:00
Friday, 28.07.2017 13:00 – 18:00

Course description:

**Proofs of academic achievement:** Obligatory Attendance and Written Exam

This course is credited for „Optionalbereich“.

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**Summer School “Humanitarian Action in the 21st Century”**

**Language:** English

**Department:** Institute for International Law of Peace and Armed Conflict / Chair for Public Law and International Law

**Contact:** Institute for International Law of Peace and Armed Conflict (IFHV), Tel.: +49 234 32 27366, Email: summerschool-ifhv@ruhr-uni-bochum.de

**Degree programme:** Bachelor, Master

**Module:** Summer School “Humanitarian Action in the 21st Century”

Module taught entirely in foreign language: Yes

**Course type:** Summer School

**Credit Points:** 5 CP

**Teacher/Lecturer:** Prof. Dr. Dennis Dijkzeul

**Room**  
IFHV, BF 4.16  
Massenbergstraße 9 B  
44787, Bochum

**Day, Time**  
07-12.08.2017  
Premeeting: 16.06.2017

**Begin**  
-

**Course description:**

WHAT IS THE SUMMER SCHOOL ALL ABOUT?

Earth quakes, floods, forced displacements, and civil wars – these are humanitarian crises situations reported daily by the news media. But who is responsible, if people become victims of war and forced displacement? What is the legal foundation for crises operations of humanitarian organizations? What are the impacts of humanitarian interventions? How can humanitarian action be coordinated most effectively? And also, are humanitarian interventions in fact able to address the root causes of crisis and conflict?

Humanitarian organizations like the International Red Cross, Médecins Sans Frontières, Care International and World Vision, and many others provide emergency relief in disasters and humanitarian crises. Despite the idealistic goals of humanitarianism, humanitarian organizations are often criticized. Too often humanitarian interventions and aid refuel and prolong conflict, and humanitarian assistance is provided in an inefficient and unprofessional way.

The Summer School ‘Humanitarian Action in the 21st Century’ is a good opportunity to gain an insight in the exciting and challenging field of humanitarian action. The Summer School will familiarize participants with the fascinating, but demanding field of international humanitarian action and the manifold problems associated with reducing human suffering in crisis-zones.

The center of attention is the ethical and practical challenge that humanitarian organizations face in global society today. The Summer School focuses on the legal and political foundations of humanitarian interventions, and the mode of operation and management of humanitarian
organizations.
Participants attend lectures, discussions, and a simulation exercise in which they can take on the role of humanitarian actors and learn about the coordination mechanisms of international humanitarian action first-hand. On the last day of the Summer School a workshop will take place where experts of humanitarian organizations tell about their experiences in the interdisciplinary professional field of humanitarian action.

**Proofs of academic achievement:** Review / Presentation or Moot Court / Essay Optional

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
Marketing Management

Language: English

Department: Sales & Marketing Department
Contact: Lukas Isenberg; lukas.isenberg@rub.de; -24034
Degree programme: Bachelor
Module: Marketing Management
Module taught entirely in foreign language: Yes
Course type: Lecture + Exercise
Credit Points: 10
Teacher/Lecturer: Prof. Dr. Schmitz

Room | Day, Time | Begin
--- | --- | ---
HZO 50 + HZO 40 | Wednesday 12h-14h + Thursday 14h-18h | 20/04/2017

Course description:
The module Marketing Management includes content about basic theories and managerial approaches in the field of Marketing as well as basic principles of Marketing Research.

Proofs of academic achievement: Written Examination

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Labor Economics

Language: English

Department: Chair of Empirical Economics
Contact: Katrin Pritsch, -25341, empwifo@rub.de
Degree programme: Master
Module: Labor Economics
Module taught entirely in foreign language: Yes
Course type: Lecture and tutorial
Credit Points: 5
Teacher/Lecturer: Prof. Dr. Thomas Bauer

Requirements: Knowledge of microeconomics is required. Prior coursework in the B.Sc. module "Grundlagen der Empirischen Wirtschaftsforschung" is recommended.

Room | Day, Time | Begin
--- | --- | ---
HGC 50 | Wednesday 10.00-12.00 | 26/04/2017

Course description:
The labor market affects the daily lives and the welfare of every individual directly. Hence, the analysis of labor markets is of importance and interest not only to economists but to the population at large. Labor economics is a very challenging and a stimulating area in economics due to the special characteristics of the labor market. For example, different to capital workers are not commodities with fixed characteristics and make decisions about the nature of their participation in the labor market. Institutions affect the labor market much more than any other market.

The aim of this module is to give an understanding of the distinctive features of labor markets and the ways in which they operate. Among other things, we will analyse labor supply, labor demand, human capital, and the role of different labor market institutions and labor market policies for wages and employment. Throughout the module, we attempt to integrate theoretical issues and empirical evidence, and to address questions of policy. The latter will concentrate on European issues.

**Proofs of academic achievement**: written examination (90 minutes)

This course is open for refugees taking part in preparatory courses.

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**Microeconometrics**

**Language**: English

**Department**: Lehrstuhl/...

**Contact**: 32-25341, thomas.bauer@rub.de

**Degree programme**: Master

**Module**: Microeconometrics

Module taught entirely in foreign language: Yes

**Course type**: Lecture and tutorial

**Credit Points**: 10

**Teacher/Lecturer**: Prof. Dr. Thomas Bauer with assistants and postdoctoral candidates from the RWI

**Requirements**: Advanced knowledge of empirical research and/or econometrics is required.

**Room**

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<tr>
<td>UFO 0/10 / GBCF 04/614</td>
<td>Wednesday 14.00-18.00</td>
<td>19/04/2017-26/07/2017</td>
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</table>

**Course description**:

This module deals with the advanced analysis of econometric methods applicable to micro data. In particular, discrete choice and selection models as well as advanced empirical evaluation methods are covered. Within the lecture, the participants are introduced to the theoretical concepts of the methods. Within the tutorials, these methods are applied to real world data by making use of the econometric software package STATA.

**Proofs of academic achievement**: written examination (90 minutes)

This course is open for refugees taking part in preparatory courses.
Empirical Economics: Selected Problems

Language: English

Department: Lehrstuhl/...
Contact: 32-25341, thomas.bauer@rub.de
Degree programme: Master
Module: Empirical Economics: Selected Problems
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 5
Teacher/Lecturer: Prof. Dr. Thomas Bauer with assistants and postdoctoral candidates from the RWI
Requirements: Knowledge of empirical research and/or econometrics is required.

Room: GBCF 04/614  
Day, Time: Wednesday 14.00-18.00  
Begin: 14/06/2017-19/07/2017

Course description:
This module deals with the advanced analysis of specific topics in the field of empirical economics (e.g., labor economics, health economics, or education economics). In a basic lecture, the participants are introduced to the theoretical and empirical concepts of the topic. The lectures will also review some important empirical studies of the topic, explaining the way the economic problem was represented by an econometric model. The students will then be assigned to present major publications of the research field in order to deepen the knowledge obtained through the lecture.

Proofs of academic achievement: written examination (90 minutes)

Introductory Migration Economics

Language: English

Department: Lehrstuhl/...
Contact: Julia.Bredtmann@rub.de
Degree programme: Bachelor
Module: Introductory Migration Economics
Module taught entirely in foreign language: Yes
Course type: Lecture and Seminar
Credit Points: 5
Teacher/Lecturer: Dr. Julia Bredtmann
Requirements: Knowledge of the compulsory module “Statistik II” is required. Knowledge of the modules “Statistik III” and “Angewandte Emprische Wirtschaftsforschung” is recommended.

Room: GC 03/46  
Day, Time: Wednesday 16.00-18.00  
Begin: 19/04/2017

Course description:
This module gives an introduction to the topic of migration economics. The module consists of an introductory lecture and a literature seminar. The literature gives an overview of the basic theoretical and empirical concepts dealt with in migration economics. The seminar aims to deepen specific topics dealt with in the lecture. Students are required to independently prepare for this. In doing so, it is expected that each student summarizes and presents a journal article from the field of migration economics.

**Proofs of academic achievement:** 50% written examination, 30% term paper (5 pages), 20% presentation (15 minutes)

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**Population and Family Economics**

**Language:** English

**Department:** Lehrstuhl/...

**Contact:** Dr. Sandra.Schaffner@rwi-essen.de

**Degree programme:** Master

**Module:** Population and Family Economics

Module taught entirely in foreign language: Yes

**Course type:** Lecture and literature seminar

**Credit Points:** 5

**Teacher/Lecture:** Dr. Sandra Schaffner (RWI)

**Requirements:** Advanced knowledge of empirical research and/or microeconometrics is required.

**Room**

GBCF 04/411

**Day, Time**

Wednesday 12.00-14.00

**Begin**

26/04/2017

**Course description:**

This module aims to introduce the participants to some of the main issues that play a role in the field of population, demography and family from the perspective of economics. This covers the demographic change, fertility, marriage, labour supply of women, schooling, migration, health and mortality.

In the first part, there is a brief introduction in the economic models whereas the second part consists of applied econometric literature that analyses the subjects.

**Proofs of academic achievement:** 50% written examination, 50% presentation

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**Economics of Market Failure**

**Language:** English

**Department:** Chair for Applied Microeconomics

**Contact:** Tel 0234/32-22887, appliedmicro@rub.de

**Degree programme:** BSc in Management and Economics

**Module:** Economics of Market Failure

Module taught entirely in foreign language: Yes

**Course type:** Lecture (2h) plus tutorial (2h)
Credit Points: 10 ECTS
Teacher/Lecturer: Prof. Dr. Julio R. Robledo and assistants
Requirements: Good knowledge of basic microeconomic theory, good command of English.

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<tr>
<td>HZO 80</td>
<td>Monday, 14-16</td>
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<td>HZO 80</td>
<td>Tuesday, 14-16</td>
<td>18/04/2017</td>
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Course description:
The module covers standard public economics allocation topics at an undergraduate level: equilibrium, Pareto-efficiency, public goods, externalities, asymmetric information, monopoly.

Proofs of academic achievement: Written examination

This course is open for refugees taking part in preparatory courses.

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**Microeconomics II**

Language: English

Department: Chair for Applied Microeconomics
Contact: Tel 0234/32-22887, appliedmicro@rub.de
Degree programme: MSc in Economics, MSc in Management and Economics
Module: Microeconomics II
Module taught entirely in foreign language: Yes
Course type: Lecture (2h) plus tutorial (2h)
Credit Points: 5 ECTS
Teacher/Lecturer: Prof. Dr. Julio R. Robledo and assistants
Requirements: Good knowledge of basic microeconomic theory, good command of English.

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<tr>
<td>HGC 40</td>
<td>Monday, 12-14</td>
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<td>HZO 80</td>
<td>Tuesday, 12-14</td>
<td>18/04/2017</td>
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Course description:
The module covers standard IO topics at master level: monopoly, oligopoly, product differentiation, pricing strategies, mergers.

Proofs of academic achievement: Written examination

This course is open for refugees taking part in preparatory courses.
Management Game „General Management“

Language: English

Department: Institute of Management
Contact: Dr. Martin Seidler, +49 (0)234 32-22235, Martin.Seidler@rub.de
Degree programme: Bachelor Management and Economics
Module: Management Game “General Management”
Module taught entirely in foreign language: Yes
Course type: management game
Credit Points: 5
Teacher/Lecturer: Prof. Dr. Brigitte Werners/Dr. Martin Seidler
Requirements: Knowledge of the modules „Kostenrechnung“ (cost accounting), „Jahresabschluss“ (financial accounting) and „Finanzierung und Investition“ (finance and investment).

Room
GBCF 04/614
Day, Time
Introductory session: Friday 21st of April 10.00-11.30 am
Begin
21/4/2017

Course description:
The management game models structure and functions of industrial companies. Participants represent the boards of directors and have to make decisions in all fields of management. The groups are in competition with each other and have to cope with challenging scenarios. The students are supposed to handle complex problems and to make group-decisions under uncertainty and time pressure. Thus, they get to know interdependencies of different aspects of management while acting together in small groups and having fun in learning.

Proofs of academic achievement: Written examination

Advanced Environmental, Energy and Resource Economics

Language: English

Department: Faculty for Management and Economics
Contact: Graham.Weale@rub.com 0234 32 27400
Degree programme: Master
Module: Advanced Environmental, Energy and Resource Economics
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 5
Teacher/Lecturer: Prof. Graham Weale
Requirements: Bachelor’s Degree in Economics

Room
GBCF 04-411
Day, Time
Monday, 14.00
Begin
18/04/2017

Course description:
International seminars and lectures

Covers in 14 lectures, the basics of energy, fossil fuels, electricity, renewable energy, energy efficiency, different types of demand/price elasticity. Aimed at those seeking to work in energy, efficiency, government and NGOs.

Proofs of academic achievement: Written examination

Applied Time Series Analysis

Department: Statistics and Econometrics
Contact: Janosch Kellermann, janosch.kellermann@rub.de
Degree programme: Master
Module: Applied Time Series Analysis
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 10
Teacher/Lecturer: Prof. Dr. Vasyl Golosnoy
Requirements: At least one graduate course in Econometrics

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<tr>
<td>HGC 50</td>
<td>Tuesday 14.15 – 15.45</td>
<td>18.04.2017</td>
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<td>Monday 10.15 – 11.45 (tutorial)</td>
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Course description:
This course provides the review of time series models widely applied in economics and finance. Starting from univariate linear ARMA models we consider a broad class of linear and non-linear time series approaches (including ARIMA, GARCH, VARMA, etc.) with focusing on estimation and forecasts.
Upon successful completion of the module "Applied Time Series Analysis" students should be able to understand and to use modern time series techniques in empirical research.

Proofs of academic achievement: Written examination

Advanced Statistics

Department: Statistics and Econometrics
Contact: Janosch Kellermann, janosch.kellermann@rub.de
Degree programme: Master
Module: Advanced Statistics
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 10
Teacher/Lecturer: Prof. Dr. Vasyl Golosnoy

Language: English
**Requirements:** Bachelor courses in Inferential Statistics and Basic Econometrics, background in Mathematical Analysis

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<tr>
<td>HGC 50</td>
<td>Tuesday 10.15 – 11.45</td>
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<td>Tuesday 8.15 – 9.45 (Tutorial)</td>
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**Course description:**
This course provides the first graduate course in statistics, which concentrates primarily on basic statistical concepts such as random variables and distributions, estimation, testing, asymptotic approximations.
Upon successful completion of the module "Advanced Statistics" students should have a sound theoretical background in statistics which is required in more applied and specialized quantitative courses.

**Proofs of academic achievement:** Written examination
INSTITUTE OF WORK SCIENCE

Advanced Seminar on Change Management (in English)

Language: English

Department: Chair for Work, Human Resources and Leadership
Contact: Prof. Dr. Uta Wilkens, 0234-32-27876, uta.wilkens@rub.de
Degree programme: Master
Module: / Module taught entirely in foreign language: Yes
Course type: Seminar with practice Week
Credit Points: 10 ECTS
Teacher/Lecturer: Prof. Dr. Uta Wilkens

Day, Time
Begin
Mostly: NB 1/66 (see Homepage)
See Homepage
20/04/2017 (orientation class)

Course description:
The center of attention in this module lies on managerial decision making and coping with the organizational change process. Students learn about the theoretical frameworks for managerial decision making and how such decisions may force internal change on the individual, the group and the organizational level. For each level specific change management instruments are analyzed. Further, challenging side-effects especially personnel reduction and possible alternatives are discussed. Overall, we highlight maintenance of organizational capability to change as an important managerial task. (For further information see homepage: http://www.aup.ruhr-uni-bochum.de/aup/lehre/wiwi/sommer.html.de)

Proofs of academic achievement: Written exam
Urban Activism and the Right to the City

Language: English

**Department:** Faculty of Social Science  
**Contact:** international-services@sowi.rub.de, +49 (0) 234-22966  
**Degree programme:** Bachelor  
**Module:** International Structures and Processes  
Module taught entirely in foreign language: No  
**Course type:** Seminar  
**Credit Points:** 3/5  
**Teacher/Lecturer:** Dr. Sandrine Gukelberger  
**Requirements:** Registration via Campus Office

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<tr>
<td>UFO 0/05</td>
<td>Tuesday, 12.00 – 14.00</td>
<td>18/04/2017</td>
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**Course description:**

This seminar explores urban activism by analyzing its framing of alternative visions, projects and campaigns, cooperative and confrontational strategies. Urban activism in the Global South is usually concerned with austerity plans, service delivery, housing, wages, health, and transportation. Various forms of activism and protest not only demand a sustainable city as an equitable, just city, in which the needs of all citizens are met, but also a right to the city. This seminar explores how urban activism intersects with poverty, unemployment, food security, violence and so forth in cultural specific ways, and how this challenge is taken up in urban planning. The aim of this seminar is to confront urban theory and social movement theory with specific examples from urban activism in different cities worldwide.

**Proofs of academic achievement:** “Studiennachweis” (3CP): active and regular participation, lecture of compulsory reading, text reviews; “Leistungsnachweis” (5CP): as “Studiennachweis” + seminar paper or oral exam.

This course is open for refugees taking part in preparatory courses.

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**The new ideational divide: How divergent values shape EU policy-making**

Language: English

**Department:** Faculty of Social Science  
**Contact:** international-services@sowi.rub.de, +49 (0) 234-22966  
**Degree programme:** Bachelor  
**Module:** International Structures and Processes  
Module taught entirely in foreign language: No  
**Course type:** Seminar  
**Credit Points:** 3/5  
**Teacher/Lecturer:** Roman Novak
Requirements: Enrollments are only possible for students that already attended the Lecture “Einführung in die Internationalen Beziehungen”. Literature reports (summaries of one page) to the texts mentioned in Campus Office. Registration via Campus Office.

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<tr>
<td>GBCF 04/257</td>
<td>Tuesday, 10.00 – 12.00</td>
<td>18/04/2017</td>
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Course description:  
When joining the European Union its Member States expressed unanimous consent to support a certain set of common European ideas and values, and agreed to harmonize laws on a number of social, economic and political issues. However, the eruption of the European financial crisis, a resurgence of Russian expansionist policy and the migration and refugee crisis have caused divergences among EU Member States and substantially perplexed further regional integration. The risk of Brexit in turn may result in broader political implications for the entire EU project. Consequently, it is an unprecedented case in more than half a century's history of European integration when some of its aspects might be stalled or even abrogated. The question "What are the conditions of the stops and goes of the EU integration process?" is sought to be resolved. Therefore, the task of this seminar is to investigate the role of power, institutions, ideas and interest on governmental policies vis-à-vis major internal and external challenges the EU faces today. For this aim the seminar employs the following major IR theories: Neorealism, Institutionalism and Domestic Politics theories, namely Liberal Intergovernmentalism and the Societal Approach. Participants are made familiar with these theories to predict governments’ responses to major policies on the agenda.

Proofs of academic achievement: “Studiennachweis” (3CP): active participation in weekly discussions of the presentations, submission of literature reports within the stipulated period, presentation + theory paper and questions for discussion. “Leistungsnachweis” (5CP): “Studiennachweis” + seminar paper or oral exam.

This course is open for refugees taking part in preparatory courses.

The Determinants for Leadership: China, Japan and US in East Asia

Language: English

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Bachelor
Module: International Structures and Processes, International Relations  
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/5
Teacher/Lecturer: Fei Su

Requirements: Enrollments are only possible for students that already attended the Lecture “Einführung in die Internationalen Beziehungen”. Literature reports (summaries of one page) to the texts mentioned in Campus Office. Registration via Campus Office.

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<tr>
<td>GCFW 04/703</td>
<td>Tuesday, 14.00 - 16.00</td>
<td>18/04/2017</td>
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Course description:
Accounted for nearly half the world’s real economic power collectively, China, Japan and United States are taken for granted that they ought to be the potential leaders in East Asia. Moreover, they have all presented aspirations and various initiatives to extend their clout and exercise leadership in East Asia. However, faced with the gap between their aspirations and abilities, all countries partially failed to reach their goals. Thereby, instead of merely investigating statistics and indicators of measuring national power, it is necessary to explore these counties’ abilities to transform their power into political influence. In other words, due to the gap between power over resources and power over outcomes, China, Japan and United States have all experienced failure in East Asia. This gives rise to the question: what are the determinants for them to reach leadership in economic and security dynamics in East Asia? To answer this question, this seminar seeks to empirically and theoretically investigate inclusive leadership, which focuses on how to motivate followership. Both success and failure of leadership projects from China, Japan and United States will be explored. The case studies applied focus on regional economic and security issues in East Asia in the past two decades.

Proofs of academic achievement: “Studienachweis” (3CP): active participation in weekly discussions of the presentations, submission of literature reports within the stipulated period, presentation with theory paper and questions for discussion, “Leistungsnachweis” (5CP): “Studienachweis” + seminar paper or oral exam.

This course is open for refugees taking part in preparatory courses.

New technologies and behavioural changes in Africa: The birth of an “Android Generation” among the Youths in Cameroon and Senegal

Language: English

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Bachelor
Module: Cultural Change and Migration
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/5
Teacher/Lecturer: Médard Djatou
Requirements: Resgistration via Campus Office.

Room: GCFW 04/304
Day, Time: Thursday, 12.00 – 14.00
Begin: 20/04/2017

Course description:
Africa has been known as one continent where people are still attached to their cultural background with strong and holy sociocultural norms. As the first and main social unit, families play important role in socializing children with great respects to particular traditions. Nowadays due to it openness to the world communities, African societies are facing many problems related
mutations, they are characterized by increasing use of new technologies (Internet, mobile phone etc.) particularly among the young generation with induced behavioral changes. This seminar shall explore the access, the use and the impacts of new technologies on the youth identified under the term "Android Generation". It will lay an emphasis on the use and misuse of some of these new technologies like internet and mobile phone with their respective options.

Proofs of academic achievement: “Studiennachweis” (3CP): presentation, Leistungsnachweis (5CP): presentation and seminar paper.

This course is open for refugees taking part in preparatory courses.

Enjoying Theories: simple strategies for approaching and working with theories

Language: English

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Master
Module: Theories in Social Science
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/6
Teacher/Lecturer: Dr. Josefine Raasch
Requirements: A successfully completed B.A. degree is required. Registration via Campus Office.

Room | Day, Time | Begin
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GBCF 05/606 | Wednesday, 12.00 – 14.00 | 19/04/2017

Course description:
Phenomena can be investigated in different ways. One of them is applying a theory to the analysis of empirical research data. Using theories as methodologies for the analysis of research data might show some surprising insights.

Yet, sometimes theories appear to be too abstract to be applicable to research data. Theories that deconstruct phenomena might discourage us to make normative decisions, and reading of a convoluted ideal typus might leave us with the impression that theories have little to do with reality. At this point, many students lose interest in theories. This seminar aims to (re-)awake the interest in and passion for dealing with theories.

Based on texts in English and German, we will discuss four theories as embedded in academic discourses and societal necessities. We will examine how the theories address particular social issues, and how to apply the theories to the analysis of research data. To make the reading of the texts as comfortable as possible, guiding questions to each of the texts will be provided.

Students might learn: How to approach theoretical texts effectively, How to write about theories How to apply theories to the analysis of empirical research data.

Proofs of academic achievement: “Studiennachweis” (3CP): Students are required: to read the texts, to answer reflective questions to each of the texts (1-3 pages per text, 1.5 line space, three
texts can be excluded), “Leistungsnachweis” (6CP): “Studiennachweis” + seminar paper (7-10 pages).

This course is open for refugees taking part in preparatory courses.

Corporate Social Responsibility as a contested concept and practice

Language: English

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Master
Module: Employment and Organisation
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/6
Teacher/Lecturer: Prof. Sabrina Zajak

Requirements: The seminar will be conducted in English. Participating in a CSR case study is compulsory for all students. Registration via Campus Office.

Room | Day, Time | Begin
--- | --- | ---
GBCF 05/606 | Tuesday, 10.00 – 12.00 | 18/04/2017

Course description:
During the last decades, transnational companies have grown significantly and the regulation of business behaviour through states has become difficult. Confronted with societal demands, firms have started to assume social and political responsibilities and governance functions that enforce or even go beyond national legal requirements. The resulting reconfiguration of the relationship between the state, business and society is often discussed in the debate about Corporate Social Responsibility (CSR). CSR is an essentially contested concept and practice. A variety of actors are involved in shaping the meaning and practices of CSR. Conflicts arise on questions of who should shape the CSR agenda, who participates in implementing it and about the interpretation of the social, political and ecological consequences of CSR.

This seminar gives an overview on different economic, political and sociological perspectives on CSR including stakeholder theory, institutional and organisational theory, political sociology and business studies. It looks into different aspects of the contentious debate on CSR including activist-business interactions, the regulation of CSR in Germany and Europe, the implementation of social standards in global supply chains and CSR reporting. This seminar helps students to consider the implications of CSR for the role of business in society, sustainable development, and governance and democracy in general.

Proofs of academic achievement: Reading and discussing English literature. Researching a mini case study on CSR conflicts. Agreements regarding “Studiennachweis” and “Leistungsnachweis” at the beginning of the seminar.

This course is open for refugees taking part in preparatory courses.
Advanced Labour Market Research

**Language:** English

**Department:** Faculty of Social Science

**Contact:** international-services@sowi.rub.de, +49 (0) 234-22966

**Degree programme:** Master

**Module:** Work regulation and Participation; Central Topics and Issues of socio-scientific Teaching

Module taught entirely in foreign language: No

**Course type:** Seminar

**Credit Points:** 3/6

**Teacher/Lecturer:** Benjamin Läpple

**Requirements:** Registration via Campus Office.

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<td>Tuesday, 16.00 – 18.00</td>
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**Course description:**

The aim of the course is to make students familiar with the standard tools of modern labour economics. In addition, after successful completion of this course students will have a good general understanding of the labour market and will be able to apply theoretical concepts to recent labour market policies. The course covers topics like labour market institutions, investment into human capital, unions, minimum wages, parental leave, unemployment, antidiscrimination legislation and migration policies.

The course is divided into two parts. Part one consists of lectures, covering the basic concepts of the field. In the second part, students will have to present recent research papers in labour actively participate in the discussion. The field grade for the course is derived from the students’ performance in the paper presentation and the final essay.

**Proofs of academic achievement:** “Studiennachweis” (3CP): regular and active participation, oral presentation and written summary. “Leistungsnachweis” (6 CP): “Studiennachweis” + seminar paper.

This course is open for refugees taking part in preparatory courses.

Critical Thought and Orientalism

**Language:** English

**Department:** Faculty of Social Science

**Contact:** international-services@sowi.rub.de, +49 (0) 234-22966

**Degree programme:** Master

**Module:** Internationalization and Transnationalisation

Module taught entirely in foreign language: No

**Course type:** Seminar

**Credit Points:** 3/6

**Teacher/Lecturer:** Salam Alhaj Hasan

**Requirements:** Bachelor’s degree. Registration via Campus Office.
Course description:
This course focuses on politics of representations, by examining the way the West (for example Britain, France and the United States) produced knowledge about the ‘Orient’ (mainly the Middle East and India) and how this construction is intertwined with practices of domination. Using a historical framework, we will analyze (deconstruct) and critically think of events, texts and arts that have influenced how the West pictures the Orient. Different theories and ideas (e.g., post-colonial, feminist and post-structuralist) will not only help us to understand how such a ‘coherent’ picture keeps repeating itself and seems to resist newer interpretations, but also offer frameworks for critique.

Proofs of academic achievement: Discussion paper.

This course is open for refugees taking part in preparatory courses.

Emerging Powers in Global Governance

Language: English

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Master
Module: International Institutions and Processes, Policy analysis
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/6
Teacher/Lecturer: Prof. Stefan Schirm

Requirements: Enrollments are only possible for students that already attended the Lecture “Einführung in die Internationalen Beziehungen” and a seminar of the chair “International Politics”. Literature reports (summaries of one page) to the below mentioned texts (a copy template will be available in the “Handapparat” in the Faculty’s library at the beginning of March).

Room  Day, Time  Begin
GCFW 04/703  Thursday, 12.00 – 14.00  20/04/2017

Course description:
Emerging Powers such as China, Brazil and India did not only emerge economically in the last two decades, but also show a determination for more influence in world politics. Thus, emerging power’s increasing economic strengths was accompanied by their increasing aspiration for participation in global governance. Emerging Powers demand more influence in international organizations such as the UN (UNSC), the IMF, the WTO and the World Bank, challenge established powers such as the US with regard to Iran and Russia, and increasingly create own, alternative multilateral governance mechanisms. The latter refers, for example, to the foundation of UNASUR in South America, of AIIB in Asia, and the regular summits of the BRICS group to coordinate their vision of and contribution to global governance. The seminar will analyze emerging powers’ performance in global governance by focusing (1) on specific issue areas such as trade, security, and finance, (2) on specific emerging powers such as on China and Brazil, and (3) on two explanatory theories of IR, namely on neorealism and domestic politics theory.
Proofs of academic achievement: “Studiennachweis” (3CP): regular and active participation, submission of Literature reports on time, presentation including theory paper—“Leistungsnachweis” (6CP): additional examination.

This course is open for refugees taking part in preparatory courses.

Interest mediation systems in comparison – Europe and beyond

Department: Faculty of Social Science
Contact: international-services@sowi.rub.de, +49 (0) 234-22966
Degree programme: Master
Module: Europeanization, Democracy and Governance; Interest mediation
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3/6
Teacher/Lecturer: Daniel Rasch
Requirements: Good English speaking and writing skills; interests in lobbying and political decision-making. Registration via Campus Office.

Room Day, Time Begin
GC 03/42 Tuesday, 14.00 – 16.00 18/04/2017

Course description:
This seminar looks at the different interest mediation systems in the European Union, the USA and China. Core questions of interests are: what role do societal interests play in each state, how is the consultation procedure set up and are there any concerns regarding legitimacy or potential biases? We will look at institutional arrangements and historical developments in each country and discuss contextual factors like group type, resources or strategies as having an effect on the performance of societal actors. The main purpose of this seminar is to uncover the influence and success of societal actors on public policy and on the decision-making process.

Proofs of academic achievement: Obligatory presentation for both Nachweise; additional research paper (~ 20 pages) for the “Leistungsnachweis” or a written summary of the presentation (~ 15 pages) for a “Studiennachweis”.

This course is open for refugees taking part in preparatory courses.

Theory of the Welfare State

Department: Faculty of Social Science
Contact: International-services@sowi.rub.de, + 49 (0) 234-22966
Degree programme: Master
Module: -
Module taught entirely in foreign language: No
Course type: Lecture
Credit Points: 3
Teacher/Lecturer: Prof. Dr. Martin Werding

Requirements: The lecture is part of the M.Sc. Programme for students of Economics in the Dept. of Economics and Business Administration. Master students of the Dept. of Social Science can attend this lecture provided that they have some understanding of economic theory (micro and macro-level) and that they are interested in an in-depth analysis of the reasons for, as well as the consequences of, activities of the welfare state in an economic perspective. Together with a seminar on particular branches of social protection or labour economics (offered by the same lecturer in the following summer term, or offered by other lecturers in one of the two departments involved) the course can be recognized as equivalent of a module ("frei zusammengestelltes", § 7 Abs. 3 PO) in the M.A. Programme of the Dept. of Social Science. Registration via Campus Office.

Room: GBCF 04/611
Day, Time: Tuesday, 16:00 – 18:00
Begin: 18/04/2017

Course description:
Building on the economic theory of activities of the public sector and on tools for evaluating public intervention and expenditure, the lecture discusses the justification for various activities of the welfare state in developed countries and the design of typical measures of social policy applied in the following major branches: old-age provision; provision of health services and health insurance; unemployment protection and income support. In order to illustrate many of the issues discussed, the lecture provides an overview of actual welfare-state policies pursued in the OECD world in a comparative perspective. Last but not least, the role of globalization and systems’ competition for social policy devised at the national level is also addressed.

Proofs of academic achievement: Master student of the Dept. of Social Science can receive a certificate for active participation ("Studienachweis", § 9 Abs. 2 PO) based on an essay on a topical subject of their choice; they should contact the lecturer at the beginning of the course.

This course is open for refugees taking part in preparatory courses.
The European Union's Relations with the Association of Southeast Asian Nations (ASEAN)

Department: Faculty for East Asian Studies
Contact: Sebastian Bersick, +49 (0)234 32-21852, sebastian.bersick@rub.de
Degree programme: Master
Module: RIO, ASO
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 5
Teacher/Lecturer: Prof. Dr. Sebastian Bersick
Requirements: Modules APO and GPO

Room
Day, Time
Begin
GB 04/159
Monday, 16:30-18:00
24/04/2017

Course description:
This BA level course provides an introduction to the EU’s relations with Southeast Asia’s most important regional organization ASEAN. The course will discuss main theoretical approaches in the areas of Comparative Regional Integration, International Relations, and Political Economy as well as the related concepts interregional and region-to-region cooperation. Students will focus on the workings and objectives of the EU’s foreign policy vis-à-vis Southeast Asia, main policy fields and relevant regional and external actors. At the end of the course students are expected to be able to critically discuss the role of the EU as an external facilitator of regional integration in Southeast Asia as well as EU multilateral action with regard to trade and foreign and security policy.

Proofs of academic achievement: Oral examination/written examination/...

This course is open for refugees taking part in preparatory courses.

Introduction to Japanese Politics and Society

Department: East Asian Politics
Contact: Kamila Szczepanska, +49 (0)234 32-26446, Kamila.Szczepanska@rub.de
Degree programme: Bachelor
Module: APO
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: -
Teacher/Lecturer: Kamila Szczepanska, Ph. D.
Requirements: The students need to have completed and passed the GPO module.
Course description:
The module will explore the main features and transformation of Japanese politics starting from 1945 up until the current moment. We will discuss the establishment and development of Japanese democracy after the Asia-Pacific War (1931-1945), as well as the functioning of party system and parliamentary politics. Then, we will examine the multiple ‘crises’ in the 1990s and their impact on Japanese politics and economy. Next, we will discuss the ‘tectonic’ shifts in Japanese political life that took place in the last decade, including the significance of PM Koizumi Junichiro administration, the electoral victory of the Democratic Party of Japan and the return to power of the Liberal Democratic Party in 2012. Additionally, we will examine the transformation of gender/family relationships, the labour market and foreign/security policies.

The main objectives of the class are threefold: 1) to provide students with extended knowledge on both historical trajectory of Japan’s political development and the most recent challenges facing Japanese state, economy and society 2) to encourage critical analysis of academic arguments concerning Japanese politics, economy and society, and 3) to develop students’ presentation and communication skills in English.

Proofs of academic achievement: Oral examination/written examination/...

This course is open for refugees taking part in preparatory courses.

The Asia-Europe Meeting (ASEM): Actors, Interests and Issues

Language: English

Department: Faculty of East Asian Studies
Contact: Sebastian Bersick, +49 (0)234 32-21852, sebastian.bersick@rub.de;
Degree programme: Master
Module: ASO, RIO
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 4,5
Teacher/Lecturer: Prof. Dr. Name
Requirements: Bachelor

Course description:
This M.A. level seminar deals with the inter-regional dimension of EU-Asia relations. Students will discuss different theoretical and conceptual approaches as well as the factors and interests that impacted on the evolution of the Asia-Europe Meeting process in the mid-1990s and the
International seminars and lectures

process' further evolution. The role of state and non-state actors as well as the normative-institutional dimension of the cooperation and its main policy areas will be analysed. The seminar shall put students in a position to critically assess the advantages and limits of the EU’s inter-regional approach to the Asian region and its many actors.

**Proofs of academic achievement:** Oral examination/written examination/...

**This course is open for refugees taking part in preparatory courses.**

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**The politics of war memory and reconciliation in contemporary Japan**

**Language:** English

**Department:** East Asian Politics

**Contact:** Kamila Szczepanska, +49 (0)234 32-26446, Kamila.Szczepanska@rub.de

**Degree programme:** Master

**Module:** RIO

**Module taught entirely in foreign language:** No

**Course type:** Seminar

**Credit Points:**

**Teacher/Lecturer:** Kamila Szczepanska, Ph.D.

**Requirements:** Bachelor

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**Course description:**

During the course, we are going to discuss how subsequent Japanese governments handled the matter of the country's wartime past both in domestic and international spheres after 1945. We will critically investigate not only policies and measures undertaken by the government, but also initiatives relating to the addressing of the wartime past that emerged from the level of Japanese civil society. In particular, we are going to explore the matters of apology and compensation, textbook representations of the Asia-Pacific War, national attitudes towards the difficult past and the presence of revisionist attitudes in political life in Japan. Finally, we are going to investigate the importance of the 'history issue' for the relationship between Japan and its two neighbours, i.e. China and South Korea, including the impact of conflicts about the wartime past on political, economic and security relations between these three states.

The main objectives of the module are two-fold: 1) to provide students with extended knowledge on a set of wartime legacies in Japan and in the region, and 2) to encourage critical analysis of academic arguments concerning the 'history issue' in the region.

**Proofs of academic achievement:** Oral examination/written examination/...

**This course is open for refugees taking part in preparatory courses.**
China’s New Role in Global Economic Governance

Department: East Asian Studies
Contact: Sebastian Bersick, +49 (0)234 32-21852, sebastian.bersick@rub.de;
Degree programme: Master
Module: ASO; RIO
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 4,5
Teacher/Lecturer: Prof. Dr. Sebastian Bersick
Requirements: B.A.

Room GBCF 04/257
Day, Time Wednesday, 14-18
Begin 19/04/2017

Course description:
The research seminar offers an in-depth introduction into a new approach to the study of China in global affairs. China’s international roles are fundamentally changing. China’s presidency of the G20 in 2016 provided yet another example of how particularly the country’s role with regard to issues of global economic governance is undergoing a process of fundamental change. In this research seminar we apply a role theory approach to identify the domestic sources of China’s foreign policies and their impact on China’s relations with other states and international organisations. This new and innovative approach to the analysis of China’s foreign policy will help us to explain and understand better China’s role in an emerging new global economic governance architecture. The seminar will first introduce to and discuss the relevance of role theory for the study of global economic governance. Why do roles matter? How do especially the concepts of ‘national role conceptions’, ‘role contestation’, ‘role enactment’, ‘counter role taking’ and ‘significant other’ help us to study China’s foreign policies? This will then allow us to focus on and analyse China’s changing roles in global economic governance with regard to four main issue areas: (1) global financial governance, (2) global energy governance, (3) global food governance and (4) global development governance.

The seminar’s four-hours structure will allow for intensive conceptual and empirical work. In addition, students will have the opportunity to participate in an international workshop on "East Asia as a Partner of the EU in Global Governance" which will also include a roundtable on the G20 Hamburg summit which is to take place in early July 2017.

Proofs of academic achievement: Oral examination/written examination/...

This course is open for refugees taking part in preparatory courses.
Approaching Korean Culture through Music

Department: Korean Studies
Contact: Gyewon Byeon, +49 (0) 234 32-22919, gyewonbyeon@hotmail.com
Degree programme: Bachelor
Module: KB-06 Modern Korea
Module taught entirely in foreign language: No
Course type: Seminar
Credit Points: 3
Teacher/Lecturer: Dr. Gyewon Byeon
Requirements: Korean Language classes KB03 and KB05

Room  
Day, Time  
Begin  
GABF 04/509  
Wednesday, 10-12  
19/04/2017

Course description:
The main purpose of this class is to introduce Korean culture through Korean music. The present 
musical landscape in South Korea is diverse, lively, and energetic. Although the music has evolved 
in ways that make it unique, some genres of Korean music share similarities with the music of 
China and Japan, and therefore approaches comparing Korean music culture and that of its 
neighboring countries will be included in the lectures. 
This course begins with a short overview of the categorisation of Korean music culture, not only of 
traditional music but also of present-day popular music. Later lectures will take up a series of 
topics designed to explore the various traditional and contemporary musical genres in Korea and 
in some neighbouring countries. Topics will include Musical Instruments of Korea, Traditional 
Notation Systems, Rhythmic Patterns, Traditional Dance (Court and Folk Dance), Confucian 
Ritual Music, Court Music, Religious Music, Folk Music, Korean Vocal Techniques, Folk Song, 
P’ansori, Theatre Music, not only in Korea (Ch’angguk) but also in East Asia, Songs for the 
Aristocratic Class such as Kagok, Kasa and Sijo, Korean early and contemporary Pop Music, and 
Contemporary Performing Arts. 
Students will be required to read a comprehensive (but not overwhelmingly detailed) text (in 
Korean or English) to supplement the lectures and to assist a better understanding of Korean 
music culture. Also, each week, a handout of around 5-10 pages will be given to students to read 
before the following lecture.

Proofs of academic achievement: Oral examination/written examination/...

This course is open for refugees taking part in preparatory courses.
FACULTY OF SPORT SCIENCE

Applied Sport Psychology

Language: English

Department: Faculty of Sport Science, Department of Sport Psychology
Contact: Maximilian Pelka, maximilian.pelka@rub.de, 0234 32 25978

Degree programme: Bachelor
Module: B.Sc. Modul 7: Society and sport
Module taught entirely in foreign language: Yes

Course type: Seminar
Credit Points: 3
Teacher/Lecturer: Maximilian Pelka

Room: Gesundheitscampus Nord 10, SR3
Day, Time: Monday, 12-14
Begin: 24/04/2017

Course description:
This interactive course examines the application of psychological theories and research to sports behaviours. Case studies from a variety of sports will be explored to develop a set of psychological skills that can be applied across sports. Upon successful completion of this course, the student will have demonstrated the ability to apply the knowledge obtained to common situations experienced by a coach, or sports psychologist, and to discuss how psychological factors influence performance in sports, and techniques to increase performance and reduce anxiety. Assessment will be based on attendance, active participation and a final group presentation.

Proofs of academic achievement: Presentation and attendance

This course is credited for „Optionalbereich“. Yes

This course is open for refugees taking part in preparatory courses.
FACULTY OF PSYCHOLOGY

Biopsychology Research Colloquium - 118914

Language: English

Department: Faculty of Psychology, Institute of Cognitive Neuroscience (ICN), Dept. Biopsychology
Contact: Prof. Güntürkün, Kontakt: Sekretariat Biopsychologie: 0234/32-28213; biopsychologie@rub.de
Module: Ergänzendes Lehrangebot
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: zero
Teacher/Lecturer: Prof. Dr. Dr. h.c. Onur Güntürkün
Requirements: Bachelor

Room: GAFO 05/425
Day, Time: Monday, 1-3pm
Begin: http://www.bio.psy.rub.de/

Course description:
The research colloquium is open to all employees and graduate students of the Biopsychology department. The Aim is to present and discuss their research. In addition external guests are invited to give talks on different aspects of biopsychology. You can have a look at the schedule at the department’s information board and our homepage: http://www.bio.psy.rub.de/

Proofs of academic achievement: no examination
FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING

COMPUTATIONAL ENGINEERING

Fluid Dynamics

Language: English

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Fluid Dynamics
Module taught entirely in foreign language: Yes
Course type: lecture (2h) (5 open places in this course)
Credit Points: 3
Teacher/Lecturer: Prof. Dr.-Ing. R. Höffer, Dipl.-Ing. U. Winkelmann
Requirements: CE-P1, CE-P2, Fluid Mechanics (bachelor level)

Room | Day, Time | Begin
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IC 03/606 | Tuesday 10.15-11.45 | 18/04/2017

Course description:
This newly designed course is aimed to teach the fundamental basics of dynamic fluids with a focus on the computation of incompressible, turbulent flows.
During the first part of this course, emphasis is put on the main aspects of fluid dynamics, since the audience is expected to be rather inhomogeneous due to different backgrounds of previous studies.

The teaching approach of the first part is twofold: On the hand experienced teachers hold lectures about the theoretical concepts and on the other hand the participants are guided through practical exercises to consolidate the concepts:

- Short review of hydrostatics.
- Dynamics of incompressible flows involving friction. (Conservation of mass, energy and momentum, Navier-Stokes equations).
- Potential flow.
- Isotropic turbulence and turbulence in a boundary layer flow.
- Flow over streamlined and bluff bodies.
In the second part of this course the students are taught the fundamental concepts of computational fluids dynamics (CFD):
- Applications areas in the field of CFD.
- Guidelines for high quality numerical meshes.
- Derivation of the Reynold’s averaged Navier-Stokes equations and the filtered Navier-Stokes equations.
- Turbulence modeling for Reynolds averaged Navier-Stokes and large eddy simulations.
- Discretization in time and space using the finite volume method.
- Solution strategies for the discretized transport equations.
• Validation and verification methods for numerical simulations.

The acquired knowledge will be used for the subsequent practical course "Computational Wind Engineering" during the winter terms, where the students apply the teachings from "Fluid Dynamics" for computer aided simulation of flows.

Proofs of academic achievement: Written examination/ 75 minutes

This course is credited for „Optionalbereich“. 

This course is open for refugees taking part in preparatory courses.

Continuum Mechanics (MSc-CE-P07)

Language: English

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Continuum Mechanics
Module taught entirely in foreign language: Yes
Course type: lecture (2h) and excercise (2h) (5 open places in this course)
Credit Points: 6
Teacher/Lecturer: Prof. Dr. rer. nat. K. Hackl, Dr. rer. nat. Khanh Chau Le
Requirements: CE-P01, CE-P02

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Course description:
The course starts with an introduction to the advanced analytical techniques of linear elasticity theory, then moves on to the continuum-mechanical concepts of nonlinear elasticity and ends with the discussion of material instabilities and microstructures. Numerous examples and applications will be given.
• Advanced Linear Elasticity
• Beltrami equation
• Navier equation
• stress-functions
• scalar-and vector potentials
• Galerkin-vector
• Love-function
• solution of Papkovich-Neuber
• Nonlinear Deformation
• Strain tensor
• Polar descomposition
• stress-tensors
• equilibrium
• strain-rates
• Nonlinear Elastic Materials
• Covariance and isotropy
• Hyperelastic materials
• constrained materials
• Hypoelastic materials
• objective rates
• material stability
• microstructures

Proofs of academic achievement: written examination/ 120 minutes

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Dynamics and Adaptronics (MSc-CE-WP03)

Language: English

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Dynamics and Adaptronics
Module taught entirely in foreign language: Yes
Course type: lecture (2h) and excercise (2h) (5 open places in this course)
Credit Points: 6
Teacher/Lecturer: Prof. Dr.-Ing. T. Nestorovic, Appl. Dr. rer. nat. Khanh Chau Le
Requirements: CE-P01, CE-P02, basic knowledge in Structural Mechanics, Control Theory and Active Mechanical Structures

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<tr>
<td>IAN 0/018</td>
<td>Wednesday 10.00-12.00</td>
<td>19/04/2017</td>
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<tr>
<td>IAN 0/018</td>
<td>Friday 12.00-13.30</td>
<td>21/04/2017</td>
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Course description:
The course introduces the first principles of the dynamics of discrete and continuous mechanical systems: Newton laws and Hamilton variational principles. The force and energy methods for deriving the equation of motion for systems with a finite number of degrees of freedom as well as for continuous systems are demonstrated. The energy conservation law for conservative systems and the energy dissipation law for dissipative systems are studied. Various exact and approximate methods for solving dynamical problems, along with the Laplace transform method, the method of normal mode for coupled systems, and the Rayleigh method are developed for free and forced vibrations. Various practical examples and applications to resonance and active vibration control are shown.
Further, an overall insight of the modelling and control of active structures is given within the course. The terms and definitions as well as potential fields of application are introduced. For the purpose of the controller design for active structural control, the basics of the control theory are introduced: development of linear time invariant models, representation of linear differential equations systems in the state-space form, controllability, observability and stability conditions of control systems. The parallel description of the modelling methods in structural mechanics enables the students to understand the application of control approaches. For actuation/sensing purposes multifunctional active materials (piezo ceramics) are introduced as well as the basics of the numerical model development for structures with active materials. Control methods include time-continuous and discrete-time controllers in the state space for multiple-input multiple-output systems, as well as methods of the classical control theory for single-input single output systems. Differences and analogies between continuous and discrete time control systems are specified and highlighted on the basis of a pole placement method. Closed-loop controller design for active structures is explained. Different application examples and problem solutions show the feasibility and importance of the control methods for structural development. Within this course the students learn computer aided controller design and simulation using Matlab/Simulink software.

Proofs of academic achievement: written examination/ 150 minutes

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

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Finite Element Methods for Nonlinear Analyses of Materials and Structures (MSc-CE-WP06)

Language: English

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Finite Element Methods for Nonlinear Analyses of Materials and Structures
Module taught entirely in foreign language: Yes
Course type: lecture including exercise (2h) (5 open places in this course)
Credit Points: 3
Teacher/Lecturer: Prof. Dr. techn. G. Meschke, M.Sc. Abdullah Alsahly
Requirements: Basic knowledge of tensor analysis, continuum mechanics and linear Finite Element Methods is required; participation in the lecture „Advanced Finite Element Methods“ (CE-WP04) is strongly recommended

Room
IC 03/653

Day, Time
Monday 13.00-14.30

Begin
TBA (block course)

Course description:
The course is concerned with inelastic material models including their algorithmic formulation and implementation in the framework of nonlinear finite element analyses. Special attention will be paid to efficient algorithms for physically nonlinear structural analyses considering elastoplastic models for metals, soils and concrete as well as damaged based models for brittle materials. As a final assignment, the formulation and implementation of inelastic material models into an existing finite element programme and its application to nonlinear structural analyses will be performed in autonomous teamwork by the participants.

**Proofs of academic achievement:** Project work (implementation of nonlinear material models) and final student presentation within the scope of a seminar (100%)

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

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**Numerical Simulation in Geotechnics and Tunnelling (MSc-BI-WP24 und MSc-CE-WP09)**

**Language:** English

**Department:** Computational Engineering

**Contact:** CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de

**Degree programme:** MSc. Computational Engineering

**Module:** Numerical Simulation in Geotechnics and Tunnelling

Module taught entirely in foreign language: Yes

**Course type:** lecture (2h) and exercise (2h) (5 open places in this course)

**Credit Points:** 6

**Teacher/Lecturer:** Prof. Dr. techn. G. Meschke, Dr. A. Lavasan, M.Sc. H. G. Bui, M.Sc. A. Marwan

**Requirements:** Fundamental knowledge in soil mechanics and FEM

**Room**

IC 03/653

**Day, Time**

Monday 13.00-14.30

**Begin**

TBA (block course)

**Course description:**

Numerical Simulation in Geotechnics

The course gives an overall insight to the numerical simulation of geotechnical and tunneling problems by using the finite element method including constructional details, staged excavation processes and support measures. This encompasses material modeling, discretization in space and time and the evaluation of numerical results. The terms and expressions for creating proper numerical models showing appropriate mesh shapes, boundary and initial conditions are introduced. Different constitutive models with their parameters and potential fields of application for different materials are presented in order to show how accurate results can be obtained. To control the reliability of numerical models, the basics of constitutive parameter calibration, model validation and verification techniques are explained. In connection with the possibilities of 2D and 3D discretization, the basics of invariant model development are explained. To achieve a better understanding of the soil-water interactions in drained, undrained and consolidation analyses,
fully coupled hydromechanical finite element solutions are described. Basics of local and global sensitivity analyses are introduced to address the effectiveness of the contributing constitutive parameters as well as constructional aspects within the sub-systems. To perform global sensitivity analyses, which usually requires a vast number of test runs, the meta modeling technique as a method for surrogate model generation is presented. All these methods are consequently applied in the context of a reference case study on a tunneling-related topic.

Numerical Simulation in Tunneling
This tutorial provides an overview of the most important aspects of realistic numerical simulations of tunnel excavation using the Finite Element Method including staged excavation processes and support measures. This encompasses material modeling, discretization in space and time and the evaluation of numerical results. In the framework of the exercises nonlinear numerical analyses in tunneling will be performed by the participants in autonomous teamwork in the computer lab.

Proofs of academic achievement: Study work (100 %)

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Advance Finite Element Methods (MSc-CE-WP04)

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Advanced Finite Element Methods
Module taught entirely in foreign language: Yes
Course type: lecture including exercise (4h) (5 open places in this course)
Credit Points: 6
Teacher/Lecturer: Prof. Dr. techn. G. Meschke, M.Sc. Tagir Iskhakov
Requirements: Basics in Mathematics, Mechanics and Structural Analysis (Bachelor), good knowledge in Finite Element Methods in Linear Structural Mechanics (CE-P05)

Room: IC 04/408
Day, Time: Monday 08.30-11:45
Begin: 24/04/2017

Course description:
Based upon a brief summary of non-linear continuum mechanics the weak form of non-linear elastodynamics, its consistent linearization and its finite element discretization are discussed and, in a first step, specialized to one-dimensional spatial truss elements to understand the principles of the formulation of geometrically nonlinear finite elements. In addition, an overview of nonlinear constitutive models including elasto-plastic and damage models is given. The second part of the lecture focuses on algorithms to solve the resulting non-linear equilibrium equations by load- and arc-length controlled Newton-type iteration schemes. Finally, the non-linear finite
element method is used for the non-linear stability analysis of structures. The lectures are supplemented by exercises to support the understanding of the underlying theory and to demonstrate the application of the non-linear finite element method for the solution of selected examples. Furthermore, practical applications of the non-linear finite element method are demonstrated by means of a commercial finite element programme.

Proofs of academic achievement: Written examination / 120 minutes (85%), Homework & PC exercise (15%)

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Object-oriented Modelling and Implementation of Structural Analysis Software (MSc-CE-WP10)

Language: English

Department: Computational Engineering
Contact: CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de
Degree programme: MSc. Computational Engineering
Module: Object-oriented Modelling and Implementation of Structural Analysis Software
Module taught entirely in foreign language: Yes
Course type: Block seminar (5 open places in this course)
Credit Points: 4
Teacher/Lecturer: Prof. Dr.-Ing. Matthias Baitsch, Prof. Dr. techn. G. Meschke, M.Sc. H. G. Bui
Requirements: Finite Element Methods in Linear Structural Mechanics and Modern Programming Concepts in Engineering

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<td>ID 04/459</td>
<td>Monday 10:15 - 11:45</td>
<td>24.04.2017</td>
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<tr>
<td>ID 04/471</td>
<td>Monday 10:15 - 11:45</td>
<td>24.04.2017</td>
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Course description:
The seminar links the theory of finite element methods with object-oriented programming in the sense that the finite element theory is applied within a finite element program developed by the students. In order to gain insights into both topics – object-oriented programming and finite element theory – students implement an object-oriented finite element program for the analysis of spatial truss structures. This combination of the theory of numerical methods with object-oriented programming provides an inspiring basis for the successful study of computational engineering. In the lecture, the fundamentals of the finite element method and object-oriented programming are briefly summarized. The programming part of the course comprises two parts. In the first part, the topic is fixed: Students individually develop an object-oriented finite element program for the linear analysis of spatial truss structures. The program is verified by means of the static analysis of a representative benchmark and afterwards applied for the numerical analysis of an individually designed spatial truss structure. In the second part, students can choose between different options. Either, the application developed in the first part is extended to more challenging problems (nonlinear analysis, other element types, etc.) or students switch to an
existing object-oriented finite element package (e.g. Kratos) and develop an extension of that software.

Proofs of academic achievement: Study project and oral examination

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses

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**Recent Advances in Numerical Modelling and Simulation (MSc-BI-W35)**

Language: English

**Department:** Computational Engineering  
**Contact:** CompEng Office, IC 03/549, 0234/32-25485, compeng-support@rub.de  
**Degree programme:** MSc. Computational Engineering  
**Module:** Recent Advances in Numerical Modelling and Simulation  
Module taught entirely in foreign language: Yes  
**Course type:** Seminar (5 open places in this course)  
**Credit Points:** 2  
**Teacher/Lecturer:** Prof. Dr. techn. G. Meschke, Assistants and Guests  
**Requirements:** Finite Element Methods

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<tr>
<td>IC 03/649</td>
<td>Friday, 16:00 – 19:00</td>
<td>21.04.2017</td>
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**Course description:**  
During the course, selected topics in the field of numerical modelling and simulation in structural mechanics will be presented. For each topic, the theory will be offered in the compact form with emphasis on the algorithms and specific numerical methods. Selected application examples will be demonstrated to validate the presented numerical models. The range of topics will be continuously updated to fit with the relevance of current research topics. The concrete research topics will include, for example, the Extended Finite Element Method, Phase field methods or Discrete Element Method, for the analysis of fracture and fragmentation processes, coupled (thermo-mechanical, hydro-mechanical, chemi-mechanical) multiphase models (e.g. for analysis of ground water flow), durability analysis, multi-scale model (e.g. for Fiber composites), efficient method for fluid dynamics simulations (Computational Fluid Mechanics), methods for structural optimization or current development in High Performance Computing. Depending on the topic, guest lectures will be included.

Proofs of academic achievement: Seminar presentation

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
FACULTY OF ELECTRICAL ENGINEERING AND
INFORMATION TECHNOLOGY

For more information about the Faculty of Electrical Engineering and Information Technology, see page 12.

This faculty has one Master taught in English:

- Lasers and Photonics

Optical Metrology, 141263

Language: English

Department: Photonics & Terahertz Technology
Contact: Priv.-Doz. Dr.-Ing. Nils C. Gerhardt, Tel.: 26514, Nils.Gerhardt@rub.de
Degree programme: Master
Module: Lasers and Photonics, Elektrotechnik und Informationstechnik
Module taught entirely in foreign language: Yes
Course type: Lecture with tutorials
Credit Points: 6
Teacher/Lecturer: Priv.-Doz. Dr.-Ing. Nils C. Gerhardt
Requirements: Bachelor

Room
Lecture: ID 04/401
Tutorial: ID 03/419, ID 03/401

Day, Time
Lecture: Monday 14-16
Tutorial: Friday 10-12

Begin
Kick-off meeting 21.04.2017 in ID 03/419

Course description:
Optical metrology is used as cross-sectional technology in many disciplines. At first, the basic characteristics of light and its interaction with matter are pointed out in a short fundamental chapter. Subsequently, the tools of optical metrology, i.e. active and passive optical elements are discussed. The main part of the lecture deals with measuring techniques like: geometry measurements, profilometry, shape measurements, spectroscopy, high-speed cameras, infrared imaging, and biophotonics.

Proofs of academic achievement: Oral exam

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
**Photonics, 141261**

**Language:** English

**Department:** Photonics & Terahertz Technology  
**Contact:** Prof. Dr. Martin R. Hofmann, Tel.: 22259, Martin.Hofmann@rub.de  
**Degree programme:** Master  
**Module:** Lasers and Photonics, Elektrotechnik und Informationstechnik  
Module taught entirely in foreign language: Yes  
**Course type:** Lecture with tutorials  
**Credit Points:** see examination rules  
**Teacher/Lecturer:** Prof. Dr. Martin R. Hofmann  
**Requirements:** Bachelor  

**Room**  
Lecture: ID 04/445  
Tutorial: ID 03/419, ID 04/401  
**Day, Time**  
Lecture: Wednesday 10-12  
Tutorial: Thursday 14-16  
**Begin**  
19.04.2017  

**Course description:**  
The lecture starts with the fundamentals of linear optics (refraction, diffraction, dispersion etc.). Afterwards, the interaction of light and matter is analysed and the fundamentals of lasers are worked out. Important laser systems are discussed and principles of the generation of short light pulses are explained. Furthermore, the principles and applications of non-linear optics are discussed. As the most important photonic application, optical memories and optical telecommunications are discussed in separate chapters. The lecture is concluded with an outlook on the potential of photonic crystals.

**Proofs of academic achievement:** Oral exam  

This course is credited for „Optionalbereich“.  
This course is open for refugees taking part in preparatory courses.

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**Biomedical Optics**

**Language:** English

**Department:** Photonics & Terahertz Technology  
**Contact:** Prof. Dr. Martin R. Hofmann, Tel.: 22259, Martin.Hofmann@rub.de  
**Degree programme:** Master  
**Module:** Lasers and Photonics, Elektrotechnik und Informationstechnik  
Module taught entirely in foreign language: Yes  
**Course type:** Seminar  
**Credit Points:** 3  
**Teacher/Lecturer:** Prof. Dr. Martin R. Hofmann  
**Requirements:** Bachelor  

**Room**  
**Day, Time**  
**Begin**
Course description:
Exemplary topics are optical coherence tomography, confocal microscopy, fluorescence spectroscopy etc.

Proofs of academic achievement: continual assessment

This course is credited for „Optionalbereich“. 

This course is open for refugees taking part in preparatory courses.

Physical Attacks and Countermeasures

Language: English

Department: Kommunikationssicherheit
Contact: Priv.-Doz. Dr. Amir Moradi, Tel.:27219, Amir.Moradi@rub.de
Degree programme: Master
Module: Elektrotechnik und Informationstechnik
Module taught entirely in foreign language: Yes
Course type: Lecture with tutorials
Credit Points: 5
Teacher/Lecturer: Priv.-Doz. Dr. Amir Moradi
Requirements: Bachelor

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<td>Tutorial: ID 03/471</td>
<td>Tutorial: Monday 16-17</td>
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<td>Lab exercise: ID 2/632</td>
<td>Lab exercise: Monday 17-18</td>
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Course description:
The modern cryptographic algorithms provide a reasonable level of security against the known mathematical and analytical cryptanalysis attacks. At the end the cryptographic algorithms are realized to be used in a security-enabled application. This realization is done by implementing the desired cryptographic algorithm using some program codes (in software) or using logic elements (in hardware). Physical access of the users to the cryptographic devices (e.g. a smartcard used for payment, a contactless card used for authentication, and smartphones) where a secret key is embedded brought a new form of attacks called physical attacks. This kind of attacks aims at extracting the secret key used by the cryptographic algorithm from the target implementation. Breaking a system by means of physical attack does not infer to weakness of the algorithm, but of the implementation. Therefore, considering such kinds of attack when designing a cryptographic device is a must. The goal of this lecture is to give an overview about the known physical attacks and most considerably the schemes developed to counter such a kind of attacks. In the first part of the lectures different kinds of physical attacks are introduced, while we focus later on countermeasures and the methods to make implementations resistant against the known physical attack.
Proofs of academic achievement: Oral exam

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
FACULTY OF MATHEMATICS

Numerical Methods and Stochastics

Language: English

Department: Mathematics
Contact: N.N.; Prof. Dr. Christian Kreuzer, 0234 3223242, Christian.Kreuzer@rub.de
Degree programme: Master Course Computational Engineering
Module: Numerical Methods and Stochastics
Module taught entirely in foreign language: Yes
Course type: Lecture series
Credit Points: 6
Teacher/Lecturer: N.N. and Prof. Dr. Christian Kreuzer
Requirements: Knowledge of Analysis, Numerics and Stochastics on the level of a bachelor in engineering science

Room: NA 6/99, NA 01/99
Day, Time: Mon. 15:15-16:45, Wed. 12:30-14:00
Begin: 19/04/2017

Course description:
Numerics:
Two-point boundary value problems, prerequisites for finite element and finite volume methods, efficient solvers for large linear systems of equations, linear and non-linear optimization.

Stochastics:
- Fundamental concepts of probability and statistics: (multivariate) densities, extreme value distributions, descriptive statistics, parameter estimation and testing, confidence intervals, goodness of fit tests.
- Time series analysis: trend and seasonality, ARMA models, spectral density, parameter estimation, prediction.
- Multivariate statistics: correlation, principal component analysis, factor analysis.
- Linear models: multiple linear regression, F-test for linear hypotheses, Analysis of Variance.

Proofs of academic achievement: 2 hours written exam

Computational Fluid Dynamics

Language: English

Department: Mathematics
Contact: Prof. Dr. Rüdiger Verfürth, 0234 32 23247, Ruediger.Verfuerth@rub.de
Degree programme: Master Course Computational Engineering
Module: Computational Fluid Dynamics
Module taught entirely in foreign language: Yes
Course type: Lecture & Exercise
Credit Points: 6
Teacher/Lecturer: Prof. Dr. R. Verfürth

Requirements: Basic knowledge about: partial differential equations and their variational formulation, finite element methods, numerical methods for the solution of large linear and non-linear systems of equations

Room          Day, Time        Begin  
ND 3/99       Mon. 11:15-12:45   19/04/2017  
NA 02/99      Wed. 15:00-17:00

Course description:
The class provides an overview of numerical techniques that are used to solve the partial differential equations describing fluid flow problems. The course starts with an introduction of the mathematical models describing the dynamics of incompressible as well as compressible fluid flow problems. It contains detailed discussions of numerical methods for the Poisson problem, the heat equation and the advection equation and shows how these methods can be used as building blocks for numerical algorithms in CFD.

Proofs of academic achievement: 2-hour closed book written exam

Numerical Methods and Scientific Computing

Language: English

Department: Mathematics
Contact: Dr. Mario Lipinski, 0234 322 3246, Mario.Lipinski@rub.de
Degree programme: Master
Module: Numerical Methods and Scientific Computing
Module taught entirely in foreign language: Yes
Course type: Lecture with integrated exercises
Credit Points: 4
Teacher/Lecturer: Dr. Mario Lipinski
Requirements: Basic knowledge in mathematics for engineers or scientists

Room          Day, Time        Begin  
HZO 60        Thursday, 12 am-3pm 20/04/2017

Course description:
The course is aimed at engineers and scientists.
In the course, basic algorithms of numerical mathematics will be presented.
Exercises will deal with implementing those algorithms in Octave.
The following topics are covered:
- Systems of linear equations (exact solvers, iterative solvers, errors)
- Systems of non-linear equations (Newton’s method)
- Interpolation (Lagrange interpolation, Hermite interpolation, cubic splines)
- Numerical integration (Newton-Cotes formulas, Gauss formulas, Romberg’s method, overview: multidimensional integration)
- Ordinary differential equations (single step methods, Runge-Kutta
methods, step size control, overview: multi step methods)
- Ordinary boundary value problems (difference method, finite element method)
- Partial differential equations (difference method, finite element method)
- Eigenvalues / eigenvectors (power method, Rayleigh quotients, inverse methods, QR method)

Proofs of academic achievement: Written examination

Cryptocurrencies

Language: English if required

Department: Mathematics
Contact: Prof. Dr. Sebastian Faust, Sebastian.Faust@gmail.com
Degree programme: Bachelor and Master
Module: Cryptocurrencies
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 4,5
Teacher/Lecturer: Prof. Dr. Sebastian Faust
Requirements: Basic knowledge about cryptography (e.g. from course “Kryptographie”)

Room
IC 03/444-414

Day, Time
Thursday, 2 pm – 4 pm

Begin
20/04/2017

Course description:

Goal: Comprehension of cryptographic protocols and techniques in the field of digital currencies.

The students will learn about cryptographic procedures and protocols that are used in the digital economy. The basics of eCash as well as cryptographic currencies like Bitcoin and Ethereum will be looked at.

The course will include topics such as:
- cryptographic protocols
- eCash procedures
- introduction to block chain technology
- proof of work
- bitcoin
- ethereum
- mining
- alternative cryptographic currencies
- smart contracts
- attacks and security
- use and regulation of cryptographic currencies.

The lecture will be held in English if required – if not requested, it will be held in German.

Proofs of academic achievement: Written examination
**Geometric Methods in Complex Analysis**

**Language:** English

**Department:** Mathematics

**Contact:** Dr. Stefan Nemirovski, 0234 32-23331, Stefan.Nemirovski@rub.de

**Degree programme:** Master

**Module:** Geometric Methods in Complex Analysis

Module taught entirely in foreign language: Yes

**Course type:** Lecture

**Credit Points:** 6

**Teacher/Lecturer:** Dr. Stefan Nemirovski

**Requirements:** Funktionentheorie I

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<tr>
<td>NA 3/64</td>
<td>Tuesday, 8 am – 10 am</td>
<td>18/04/2017</td>
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<tr>
<td>NA 3/64</td>
<td>Tuesday, 10 am – 12 am</td>
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**Course description:**

The purpose of the course will be to give a geometric introduction to higher dimensional complex analysis. Starting from basic properties of holomorphic functions of several complex variables, the exposition will proceed to classical topics such as envelopes of holomorphy and Stein manifolds, analytic sets and coherent sheaves, pseudoconvexity and plurisubharmonicity. Connections to other areas of mathematics, in particular, symplectic and contact geometry, will be explained along the way.

**Proofs of academic achievement:** Oral examination
FACULTY OF GEOSCIENCES

Marine micropalentology

Language: English

Department: Institute for Geology, Mineralogy and Geophysics
Contact: Thomas Fockenberg Tel: 0234/32-24392 Email: thomas.fockenberg@rub.de

Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: lecture and practical work
Credit Points: 4
Teacher/Lecturer: Prof. Dr. Jörg Mutterlose

Requirements: BSc in Geosciences, knowledge in Paleontology and stratigraphy

Course description:
The course gives an overview of the various groups of microorganisms (dinoflagellates, calcareous nannofossils, diatoms, foraminifera, radiolarians, ostracods) widely used in marine geology, oceanography, ecology and oil geology. Each group will be addressed with respect to its taxonomy, ecology and paleoceanography. Special emphasis is being paid to the stratigraphic applications of these groups. Half of the time is devoted to practical exercises studying the groups under the microscope.

Proofs of academic achievement: written examination

Analytical methods

Language: English

Department: Institute for Geology, Mineralogy and Geophysics
Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: lecture
Credit Points: 2
Teacher/Lecturer: Prof. Dr. Sumit Chakraborty/Dr. Thomas Fockenberg

Requirements: bachelor degree in geosciences, fundamental knowledge in chemistry

Course description:
his is a required course at the beginning of the petrological curriculum at the Masters level. The objective of the course is to introduce the students to the variety of analytical tools that are available to the modern petrologist / geochemist. For each method discussed, the basic physical principle of the analysis, the capabilities (e.g. major / trace elements, detection limits, kinds of elements analyzed etc.) and typical applications will be introduced. The ultimate objective is to provide an overview which will help subsequently to appreciate the literature better and to plan the Masters Thesis properly.

Proofs of academic achievement: written examination

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**Low-temperature thermochronometry**

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de

Degree programme: Master

Module: -
Module taught entirely in foreign language: Yes

Course type: Lecture and exercise

Credit Points: 3

Teacher/Lecturer: Dr. Manfred Brix

Requirements: BSC in Geosciences or a related discipline

Room
Day, Time
Begin
please contact the lecturer
please contact the lecturer
please contact the lecturer

Course description:
The course provides an overview on dating techniques and their applications to the evolution of rocks between 300°C and ambient temperatures. Case studies cover the reconstruction of cooling, uplift, exhumation, and denudation of metamorphic or plutonic rocks (including hydrothermal ore deposits) as well as sedimentary basin subsidence, inversion, and fault movements.

Proofs of academic achievement: Written examination

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**Organic hydrochemistry**

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de

Degree programme: Master

Module: -
Module taught entirely in foreign language: Yes

Course type: Lecture and exercise

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Frank Wisotzky
International seminars and lectures

Requirements: Knowledge about hydrogeology

Room
please contact the lecturer

Day, Time
please contact the lecturer

Begin
please contact the lecturer

Course description:
Behaviour of organic substances in aquifers, remediation

Proofs of academic achievement: Examination and handling of exercises

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**Exploration geophysics II**

Language: English

Department: Institut fuer Geologie, Mineralogie und Geophysik

Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de

Degree programme: Master

Module: -
Module taught entirely in foreign language: Yes

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Jörg Renner

Requirements: BSc in Geosciences or a related discipline

Room
please contact the lecturer

Day, Time
please contact the lecturer

Begin
please contact the lecturer

Course description:
1) Introduction into origin of hydrocarbons; 2) Physical properties of hydrocarbons
3) Basics of poro-elasticity; 4) Hydraulic borehole testing (theory and practice)
5) Geothermal energy provision; 6) Particular seismic waves (guided waves, waves in fluid-saturated media)

aim: students are supposed to learn the basics of procedures often used in exploration beyond the seismic methods taught in “Exploration Geophysics I”; besides practical aspects the theoretical description (differential equations) and solving strategies are presented

Proofs of academic achievement: Written exam (+ weakly assignments)

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**Theoretical geophysics – Seismic waves**

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de

Degree programme: Master

Module: -
Module taught entirely in foreign language: Yes

Course type: Lecture and exercise
Credit Points: 5  
Teacher/Lecturer: Prof. Dr. Wolfgang Friederich  
Requirements: Generally: BSc in Geosciences or a related discipline  
Room please contact the lecturer  
Day, Time please contact the lecturer  
Begin please contact the lecturer  

Course description:  
The course gives an introduction to the theory of seismic waves and the description of seismic sources. Starting from the elastodynamic wave equation the course treats wave propagation in homogeneous acoustic and elastic media. Highlight is the propagation of seismic waves in a layered Earth model.  

Proofs of academic achievement: Written examination and exercises  

Dynamics of the Earth II  

Department: Institut für Geologie, Mineralogie und Geophysik  
Contact: Thomas Fockenberg; 0234/32-24392; thomas.fockenberg@rub.de  
Degree programme: Master  
Module:  
Module taught entirely in foreign language: Yes  
Course type: lecture  
Credit Points: 5  
Teacher/Lecturer: Prof. Dr. Wolfgang Friederich  
Requirements: Generally B.Sc. in Geosciences or a related discipline.  
Room Please contact the lecturer  
Day, Time Please contact the lecturer  
Begin Please contact the lecturer  

Course description:  
State functions of minerals at high pressure - temperature conditions; Kinetics of lattice defects, deformation mechanisms at high temperatures, Transportation of energy and temperatures distribution in the Earth´s interior; Tomography of the Earth  

Proofs of academic achievement: written examination  

This course is credited for „Optionalbereich“. No
Practical silicate rock analysis

Department: Institut für Geologie, Mineralogie und Geophysik
Contact: Dr. Thomas Fockenberg, 24392, thomas.fockenberg@rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: practical work
Credit Points: 4
Teacher/Lecturer: Dr. Thomas Fockenberg
Requirements: BSc in geosciences

Course description:
Whole rock analysis using spectroscopic methods (AAS, ICP-AES, XRF), coulometric methods (Karl-Fischer titration of water), potentiometric methods (Determination of FeO) and quantification of CO2. The data will be used for the interpretation of the rock genesis with geochemical computer programs

Proofs of academic achievement: thesis

Sedimentary systems II – Sequence stratigraphy

Department: Institut für Geologie, Mineralogie und Geophysik
Contact: Dr. Thomas Fockenberg, 24392, thomas.fockenberg@rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: lecture
Credit Points: 3
Teacher/Lecturer: Prof. Dr. Adrian Immenhauser
Requirements: BSc in Geosciences or a related discipline.

Course description:
This course deals with sequence stratigraphy of marine sedimentary rocks. After a general introduction to the topic, more specific classes will deal with a series of key issues that include amongst others sequence boundaries, systems tracts or parasequences. The topic of seismic stratigraphy is briefly covered.

Proofs of academic achievement: Oral presentation of selected topics and compilation of a short overview paper
For more information about the Faculty of Chemistry and Biochemistry, see page 13.

This faculty has three Masters taught in English:

- Master of Science in Biochemistry
- Master of Science in Chemistry
- Molecular Sciences (iMOS)
FACULTY OF BIOLOGY AND BIOTECHNOLOGY

Practical Exercises in Biotechnology

Language: English

Department: Chair in Biophysics
Contact: PD Dr. Mathias Lübken, -24465, mathias.luebben@bph.rub.de
Degree programme: Master of Science in Biology/Biochemistry
Module: S-Module Biotechnology (limited accession)
Module taught entirely in foreign language: Yes
Course type: 190335 Research Practical
Credit Points: 15
Teacher/Lecturer: Prof. Dr. Eckhard Hofmann, PD Dr. Carsten Köttin, PD Dr. Mathias Lübben
Requirements: Bachelor’s Degree in Biology/Biochemistry

Room
By arrangement
Day, Time
By arrangement
Begin
By arrangement

Course description:
Heterologous expression and purification of pharmacologically relevant membrane proteins
(practical exercises in cloning, expression and purification of membrane proteins or their functional domains)

Proofs of academic achievement: Written protocol on the exercises

Accompanying Seminar to the Practical Exercises Biotechnology

Language: English

Department: Chair in Biophysics
Contact: PD Dr. Mathias Lübken, -24465, mathias.luebben@bph.rub.de
Degree programme: Master of Science in Biology/Biochemistry
Module: S-Module Biotechnology (limited accession)
Module taught entirely in foreign language: Yes
Course type: 190336 Seminar
Credit Points: 1
Teacher/Lecturer: Prof. Dr. Eckhard Hofmann, PD Dr. Carsten Köttin, PD Dr. Mathias Lübben
Requirements: Bachelor’s Degree in Biology/Biochemistry

Room
By arrangement
Day, Time
By arrangement
Begin
By arrangement

Course description:
Heterologous expression and purification of pharmacologically relevant membrane proteins
(accompanying seminar to the practical exercises in cloning, expression and purification of membrane proteins or their functional domains)
Proofs of academic achievement: Oral seminar contribution

Special Lecture: Proteins in Biomedicine: Proteins in Signal Transduction

Language: English

Department: Chair in Biophysics

Contact: PD Dr. Mathias Lübben, 24465, mathias.luebben@bph.rub.de

Degree programme: Master Biochemistry

Module: 185850 Special Lecture in the Focal Point Programme “Proteins in Biomedicine: Proteins in Signal Transduction”
Module taught entirely in foreign language: Yes

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Klaus Gerwert, PD Dr. Martin Eisenacher, Prof. Dr. Eckhard Hofmann, PD Dr. Carsten Kötting, PD Dr. Mathias Lübben, PD Thorsten Müller, Prof. Dr. Katrin Marcus, Dr. Till Rudack, Prof. Dr. Barbara Sitek, Prof. Dr. Raphael Stoll, Dr. Ingrid Vetter, Prof. Dr. Alfred Wittinghofer

Requirements: Bachelor’s Degree in Biochemistry or Biology

Room
ND04/397

Day, Time
Friday, 13.00 – 14:30 as announced

Begin
Will be announced

Course description:
In this lecture the basic and advanced concepts of signal transduction and the proteins involved are discussed in detail, using several model systems

Proofs of academic achievement: Written exam

Lecture Series: Proteins in Biomedicine: Proteins in Signal Transduction ( = “Lab days”)

Language: English

Department: Chair of Biophysics

Contact: PD Dr. Mathias Lübben, 24465, mathias.luebben@bph.rub.de

Degree programme: Master of Biochemistry

Module: 185850 Lecture Series in the Focal Point Programme “Proteins in Biomedicine: Proteins in Signal Transduction” – “Lab days” (equivalent of the “Ringvorlesung”)
Module taught entirely in foreign language: Yes

Course type: Lectures, Student Seminar Talks, Student Poster Presentations

Credit Points: 5 CP

Teacher/Lecturer: Prof. Dr. Klaus Gerwert, PD Dr. Martin Eisenacher, Prof. Dr. Eckhard Hofmann, PD Dr. Carsten Kötting, PD Dr. Mathias Lübben, PD Thorsten Müller, Prof. Dr. Katrin Marcus, Dr. Till Rudack, Prof. Dr. Barbara Sitek, Prof. Dr. Raphael Stoll, Dr. Ingrid Vetter, Prof. Dr. Alfred Wittinghofer

Requirements: Bachelors Degree in Biochemistry, Biology, Biotechnology, Chemistry, Physics
Course description:
At the beginning of the summer semester the students will select a paper from a topic list suggested by the lectures (preferably a publication, in which demanding experimental methods have been applied to obtaining relevant insights to an interesting scientific subject. The students will prepare 1) a poster explaining the applied experimental techniques which should be orally presented in 10 min, and 2) a 20 min Power-Point based talk plus 10 min discussion on the scientific content of the paper. In addition, the lecturers introduce their scientific working field in short talks.

The course takes place on two full days. For details, also for announcement of the beginning dates, cf. Blackboard, Course No. 185850-SS15.

Proofs of academic achievement: Effective presentation by poster and talk

Literature seminar: Basic and current topics of protein crystallography

Language: English

Department: AG Röntgenstrukturnalyse an Proteinen
Contact: Eckhard Hofmann, 22463, eckhard.hofmann@bph.rub.de
Degree programme: Master/Phd
Module: Literature seminar: Basic and current topics of protein crystallography
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 2
Teacher/Lecturer: Prof. Dr. Eckhard Hofmann, Dr. Raphael Gasper-Schönenbrücher
Requirements: Basic courses in Biology/Biochemistry or related areas on protein science

Course description:
In this biweekly seminar, current papers related to protein crystallography are presented and discussed. The seminar continues also in between terms. If only attended during term with one presented seminar, 1CP is assigned.

Proofs of academic achievement: oral presentation
Modern Methods in Life Sciences: Video microscopy and confocal laser scanning microscopy

Language: English/German

Department: Cell Morphology and Molecular Neurobiology
Contact: Dr. Jacqueline Reinhard
Degree programme: PhD
Module: -
Module taught entirely in foreign language: Yes
Course type: Introductory course
Credit Points: 1/1, 1.5/2
Teacher/Lecturer: Prof. Dr. Andreas Faissner, Dr. Jacqueline Reinhard, E. Schaberg, S. Wiemann

Requirements: Master degree

Course description:
Theoretical and practical information is given about different microscopy techniques. Depending on the agreements the course can be attended for 3 to 5 days.

Proofs of academic achievement: According to prior agreement

Modern Methods in Life Sciences: Culture and analysis of neural cell types, stem and cancer cells

Language: English/German

Department: Cell Morphology and Molecular Neurobiology
Contact: Dr. Ursula Theocharidis
Degree programme: PhD
Module: -
Module taught entirely in foreign language: Yes
Course type: Introductory course
Credit Points: 1/1, 1.5/2
Teacher/Lecturer: Prof. Dr. Andreas Faissner, Christine Gottschling, Dr. Jacqueline Reinhard, Lars Roll, Dr. Ursula Theocharidis

Requirements: Master degree

Course description:
Theoretical and practical information is given about the culture of diverse primary cell types of the nervous system. Depending on the agreements the course can be attended for 3 to 5 days.
Proofs of academic achievement: According to prior agreement

190616: Kolloquium zu Forschungsarbeiten des Lehrstuhls für Molekulargenetik und Physiologie der Pflanzen

Language: English

Department: Molecular Genetics and Physiology of Plants
Contact: Angelika Ernst, 0234-32-28004, MGPP@rub.de
Degree programme: Bachelor/Master/PhD
Module: research at the institute
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 2
Teacher/Lecturer: Prof. Dr. Ute Krämer/PD Dr. Markus Piotrowski/Prof. Dr. Danja Schünemann

Room | Day, Time | Begin
---|---|---
ND 3/34 | Friday 8.45-10.00 | 07/04/2017

Course description:
Talks about ongoing research at the institute

Proofs of academic achievement: participation and lecture

190617: Kolloquium Metallhomöostase; Grundlagen und Praxis des wissenschaftlichen Arbeitens in der Molekulargenetik und Physiologie der Pflanzen

Language: English

Department: Molecular Genetics and Physiology of Plants
Contact: Angelika Ernst, 0234-32-28004, MGPP@rub.de
Degree programme: Bachelor/Master/PhD
Module: Metal homeostasis in plants
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 1
Teacher/Lecturer: Prof. Dr. Ute Krämer

Room | Day, Time | Begin
---|---|---
ND 3/34 | Wednesday 9.00-11.00 | 05/04/2017

Course description:
Reports on research related to metal homeostasis and plant metabolism

Proofs of academic achievement: participation
190618: Journal Club Molecular Genetics and Physiology of Plants

**Language:** English

**Department:** Molecular Genetics and Physiology of Plants

**Contact:** Angelika Ernst, 0234-32-28004, MGPP@rub.de

**Degree programme:** Master/PhD

**Module:**
Module taught entirely in foreign language: Yes

**Course type:** Seminar

**Credit Points:** 1

**Teacher/Lecturer:** Prof. Dr. Ute Krämer

**Room**
ND 3/34

**Day, Time**
Monday 12-13 (every four weeks)

**Begin**
03/04/2017

**Course description:**
Reports on recent publications in molecular genetics and physiology of plants

**Proofs of academic achievement:** report

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Journal club and progress reports in the NG Cellular Neurobiology

**Language:** English

**Department:** NG Cellular Neurobiology

**Contact:** Juniorprof. Dr. A. Reiner, 0234-32-24332, andreas.reiner@rub.de

**Degree programme:** Bachelor/Master/PhD

**Module:** Journal club and progress reports in the NG Cellular Neurobiology
Module taught entirely in foreign language: Yes

**Course type:** Seminar

**Credit Points:** 1

**Teacher/Lecturer:** Juniorprof. Dr. A. Reiner

**Requirements:** Basic knowledge in molecular biology, biochemistry, or neurobiology

**Room**
ND 5/63

**Day, Time**
Wednesday, 9.15-11.00

**Begin**
18/04/2017

**Course description:**
Reports and discussion on current research topics in molecular and cellular neurobiology, with a focus on neurotransmitter-gated receptors and ion channels. For more information see also: http://www.ruhr-uni-bochum.de/cellneuro.

**Proofs of academic achievement:** active participation

This course is credited for „Optionalbereich“.
**FACULTY OF MEDICINE**

**Biogenesis of cell organelles**

Language: English

**Department:** Inst. Biochemistry and Pathobiochemistry/ Systems Biochemistry  
**Contact:** Prof. Dr. Ralf Erdmann, 0234-32-28938, ralf.erdmann@rub.de  
**Degree programme:** Master of Science Biochemistry  
**Module:** Advanced Practical in the Focal Point Programme: “Molecular Medicine”  
**Module taught entirely in foreign language:** No  
**Course type:** compact course  
**Credit Points:** 7.5 (of 15)  
**Teacher/Lecturer:** Prof. Dr. Ralf Erdmann

**Requirements:** A five-week all-day practical lab course with a compulsory seminar presentation. Please note: A second Advanced Practical will have to be performed in the same semester to earn the full complement of 15 credits.

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<tr>
<td>MA 4/ 142</td>
<td>On demand</td>
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**Course description:**

After completion of the course, students will have acquired basic practical skills in biochemical, microbiological and molecular biological methods. The students will be able to cultivate pro- and eucaryotic cells, to isolate protein-complexes by affinity chromatography and to characterize these complexes according to their size (size-exclusion chromatography) and constituents (SDS-PAGE, immuno-blotting). Students will learn how state-of-the-art molecular cell biological methods are used to tackle the structure and function of cellular nanomachines. Presentation skills will be improved by learning how to present scientific data in talks and scientific discussions as well as in a written thesis.

**Proofs of academic achievement:** Assessment of experimental skills during the practical (50%), a written project report (40%), and a seminar presentation of experimental results (10%).

"Characterization of proteins isolated from peroxisomes and peroxisomal membranes of the yeast Saccharomyces cerevisiae"

Language: English

**Department:** Biochemistry and Pathobiochemistry/ Systems Biochemistry  
**Contact:** Prof. Dr. Ralf Erdmann, 0234-32-28939, ralf.erdmann@rub.de  
**Degree programme:** Master of Science Biochemistry  
**Module:** Modular Advanced Practical and Seminar in the Focal Point Programme "Molecular Medicine"

**Module taught entirely in foreign language:** Yes  
**Course type:** compact course  
**Credit Points:** 3  
**Teacher/Lecturer:** Prof. Dr. Ralf Erdmann
**Requirements:** Two weeks advanced laboratory course with an integrated seminar

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<td>MA 4/ 142</td>
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</table>

**Course description:**
After completion of the course, students will have acquired basic practical skills in biochemical, microbiological and molecular biological methods. The students will be able to isolate protein-complexes by affinity chromatography and to characterize these complexes according to their size (size-exclusion chromatography) and constituents (SDS-PAGE, immunoblotting). Students will learn how state-of-the-art molecular cell biological methods are used to tackle the structure and function of cellular nanomachines with the peroxisomal protein translocation apparatus as an example. Presentation skills will be improved by learning how to present scientific data in talks and scientific discussions.

**Proofs of academic achievement:** Assessment of active and successful participation in the practical (50%) and a written project report (50%)

This course is credited for „Optionalbereich“.

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**Actuelle issues and methods of molecular Cellbiology**

**Language:** English

**Department:** Biochemistry and Pathobiochemistry/ Systems Biochemistry

**Contact:** Prof. Dr. Ralf Erdmann, 0234-32-28938, ralf.erdmann@rub.de

**Degree programme:** Bachelor/ Master/ PhD

**Module:** Journals Club

Module taught entirely in foreign language: Yes

**Course type:** Lecture

**Credit Points:** 1

**Teacher/Lecturer:** Prof. Dr. Ralf Erdmann

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<th>Room</th>
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<td>MA 4/ 139</td>
<td>Friday 15: - 15:45h</td>
<td>biweekly</td>
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</table>

**Course description:**
Presentation and discussion in English language

**Proofs of academic achievement:** no

This course is credited for „Optionalbereich“. Yes
STEM CELL LECTURE SERIES II

Language: English

Department: Department of Anatomy and Molecular Embryology, Faculty of Medicine
Contact: Prof. Dr. Beate Brand-Saberi, Phone: +49 (0)234 32 24556, Beate.Brand-Saberi@rub.de
Degree programme: Master
Module: Stem cell lecture series II
Module taught entirely in foreign language: Yes
Course type: Scientific lectures presenting original research work
Credit Points: 5
Teacher/Lecturer: Various, including guest lecturers
Requirements: Life Science related Bachelor

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<td>NC 5/99</td>
<td>Friday 13:15-14:15</td>
<td>21/04/2017</td>
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Course description:
Acquisition of an overview about views, problems and current topics in stem cell research, introduced by various researchers.

Proofs of academic achievement: Written examination

This course is credited for „Optionalbereich“.

MOLECULAR GENETIC METHODS

Language: English

Department: Department of Anatomy and Molecular Embryology, Faculty of Medicine
Contact: PD Dr. Holm Zähres, Phone: +49 (0)234 32 25714, holm.zaehres@rub.de
Degree programme: Master
Module: Molecular Genetic Methods
Module taught entirely in foreign language: Yes
Course type: Lecture: 2 hours per week; Seminar: 1 hour per week
Credit Points: 5
Teacher/Lecturer: PD Dr. Zähres, Prof. Dietzel-Meyer
Requirements: Life Science related Bachelor

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<tr>
<th>Room</th>
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<tr>
<td>HMA 40, MA 5/61</td>
<td>Thu and Fr 08:00-10:00</td>
<td>21/04/2017</td>
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</table>

Course description:
Students will acquire skills in gene and genome analysis, skills in cloning of gene constructs, cell and animal manipulation, protein expression

Proofs of academic achievement: Written examination

This course is credited for „Optionalbereich“. Yes
MOLECULAR TRACING METHODS

Language: English

Department: Department of Cytology, Faculty of Medicine
Contact: Prof. Dr. Carsten Theiss, Phone:+49 (0)234 32 24560, carsten.theiss@ruhr-uni-bochum.de

Degree programme: Master
Module: Molecular Tracing Methods
Module taught entirely in foreign language: Yes
Course type: Seminar: 4X90 minutes, Practical: 8X180 minutes, Compact course: ‘Radiation protection & radioactive methods’ (1 week, 8h/day)
Credit Points: 5
Teacher/Lecturer: Prof. Theiss, Dr. Bühler, Dr. Happel

Requirements: Life Science related Bachelors

Room
Preliminary talk in MA 5/61; changes will be announced
Day, Time
Wed 09:00-11:00
Tue 11:00-14:00 (Pract.)
Begin
02/05/2017

Course description:
The module gives both introduction into modern microscopic techniques and their application in stem cell biology and life sciences in general as well as chances and limitations of techniques using ionizing radiation in stem cell biology, life sciences and medicine.

Proofs of academic achievement: Written abstracts, printed Powerpoint slides

This course is credited for „Optionalbereich“.

TISSUE ENGINEERING

Language: English

Department: Department of Anatomy and Molecular Embryology, Faculty of Medicine
Contact: Dr. Ajeesh Balakrishnan-Renuka, Phone: +49 (0)234 32 24704, ajeesh.br@gmail.com

Degree programme: Master
Module: Tissue Engineering
Module taught entirely in foreign language: Yes
Course type: Lecture
Credit Points: 5
Teacher/Lecturer: Prof. Köller, Prof. Hanenberg, Prof. Ott, PD Dr. Zähres, PD Dr. Behr, Dr. Klump, Dr. Trapp, Dr. Giebel, Dr. Jacobsen, Dr. Balakrishnan-Renuka

Requirements: Life Science related Bachelor

Room

Day, Time

Begin
HMA 40 and seminar room of the Department of Plastic Surgery, Bergmannsheil Hospital

Tue 14:15-15:45 18/04/2017

Course description:
The students will obtain an overview of current approaches of tissue reconstruction. Students will become familiar with the regenerative capacities of various organ systems and the technical approaches and current limitations for the repair of these organ systems.

Proofs of academic achievement: Written examination and student seminars

This course is credited for „Optionalbereich“.

LAB ROTATION

Language: English

Department: Various
Contact: Various
Degree programme: Master
Module: Lab rotation
Module taught entirely in foreign language: Yes
Course type: Practical
Credit Points: 5
Teacher/Lecturer: All PIs from associated labs
Requirements: Life Science related Bachelor

Room n/a
Day, Time Announced by individual supervisor
Begin 18/04/2017

Course description:
Learning specialized methods related to stem cell research, depending on the labs visited.

Proofs of academic achievement: Written laboratory report

This course is credited for „Optionalbereich“.
INSTITUTE OF NEURAL COMPUTATION

Autonomous Robotics: Action, Perception, and Cognition

Language: English

Department: Institute for Neural Computation
Contact: PD Dr. Rolf Würtz, 27994, rolf.wuertz@ini.rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture/Tutorial
Credit Points: 6
Teacher/Lecturer: Prof. Dr. Gregor Schöner

Requirements: Bachelor

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<tr>
<td>NB 3/57</td>
<td>Thursday, 14.15 – 16.00</td>
<td>20/04/2017 (Lecture)</td>
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<tr>
<td>NB 3/57</td>
<td>Thursday, 16.15 – 17.00</td>
<td>27/04/2017 (Tutorial)</td>
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Course description:
Neuroinformatics is concerned with the discovery of new solutions to technical problems of information processing. These solutions are sought based on analogies with nervous systems and the behaviour of organisms.

This course focuses on three exemplary problems to illustrate this approach:
(a) Artificial action (autonomous robotics);
(b) Artificial perception (robot vision);
(c) Artificial cognition (simplest cognitive capabilities of autonomous robots such as decision making, memory, behavioural organization).

The main methodological emphasis is on nonlinear dynamical systems’ approaches and dynamic (neural) fields.

Proofs of academic achievement: Oral examination

Mathematics for Modeling and Data Analysis

Language: English

Department: Institute for Neural Computation
Contact: PD Dr. Rolf Würtz, 27994, rolf.wuertz@ini.rub.de
Degree programme: Bachelor
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture/Tutorial
Credit Points: 6
Teacher/Lecturer: Prof. Dr. Laurenz Wiskott

Requirements: basic knowledge of linear algebra and calculus

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<tr>
<td>NB 3/57</td>
<td>Thursday, 12.15 – 13.45</td>
<td>20/04/2017 (Lecture)</td>
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<tr>
<td>NB 3/57</td>
<td>Thursday, 9.00 – 12.00</td>
<td>27/04/2017 (Tutorial)</td>
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Course description:
The course covers mathematical methods that are relevant for modeling and data analysis. Particular emphasis will be put on an intuitive understanding as is required for a creative command of mathematics. The following topics will be covered: Functions, vector spaces, matrices as, transformations, systems of linear differential equations, qualitative analysis of nonlinear differential equations, Bayes theory, and multiple integrals.

Proofs of academic achievement: Oral examination

Computational Neuroscience: Vision and Memory

Language: English

Department: Institute for Neural Computation
Contact: PD Dr. Rolf Würtz, 27994, rolf.wuertz@ini.rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture/Tutorial
Credit Points: 6
Teacher/Lecturer: Prof. Dr. Laurenz Wiskott
Requirements: good mathematical skills, linear algebra and calculus

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<tr>
<td>NB 3/57</td>
<td>Tuesday, 12.15 – 13.45</td>
<td>18/04/2017 (Lecture)</td>
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<tr>
<td>NB 3/57</td>
<td>Tuesday, 9.00 – 12.00</td>
<td>25/04/2017 (Tutorial)</td>
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Course description:
This lecture presents models of selforganization in neural systems, in particular addressing vision (receptive fields, neural maps, invariances, attention) and associative memory (Hopfield network).

Proofs of academic achievement: Oral examination

Machine Learning: Supervised Methods

Language: English

Department: Institute for Neural Computation
Contact: PD Dr. Rolf Würtz, 27994, rolf.wuertz@ini.rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture/Tutorial
Credit Points: 6
Teacher/Lecturer: Jun.-Prof. Dr. Tobias Glasmachers
Requirements: The course requires basic mathematical tools from linear algebra, calculus, and probability theory. More advanced mathematical material will be introduced as needed. The practical sessions involve programming exercises in Python. Participants need basic programming experience. They are expected to bring their own devices (laptops).

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<tr>
<td>NAFOF 04/493</td>
<td>Monday, 10.00 – 14.00</td>
<td>20/04/2017</td>
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Course description:
The field of machine learning constitutes a modern approach to artificial intelligence. It is situated in between computer science, neuroscience, statistics, and robotics, with applications ranging all over science and engineering, medicine, economics, etc. Machine learning algorithms automate the process of learning, thus allowing prediction and decision making machines to improve with experience.

This lecture will cover a contemporary spectrum of supervised learning methods. All lecture material will be in English.

The course will use the inverted classroom concept. Students work through the relevant lecture material at home. The material is then consolidated in a 4 hours/week practical session.

Proofs of academic achievement: Oral examination

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Mathematical Psychology

Language: English

Department: Institute for Neural Computation
Contact: Prof. Dr. Sen Cheng, NB 3/33, phone: 29486, email: sen.cheng@rub.de
Degree programme: Bachelor
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture and Tutorial
Credit Points: 6
Teacher/Lecturer: Prof. Dr. Sen Cheng
Requirements: Basic knowledge of perception, decision-making, learning and memory, e.g., “Cognition I + II”, “Learning”. Previous programming experience is not strictly required.

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<tr>
<td>NB 3/72</td>
<td>Monday, 10.00-12.00</td>
<td>24/04/2017 (Lecture)</td>
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<td>GAFO 04/615</td>
<td>Friday, 10.00-12.00</td>
<td>21/04/2017 (Tutorial)</td>
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Course description:
In the first three semesters of studying psychology, you have learned about a wide variety of perceptual, cognitive and motor processes. What you have not learned about is that some highly complex processes can be captured and explained using simple mathematical or computer models.

This class will introduce you to this powerful approach through a combination of interactive theory lectures and hands-on computer lab exercises. The lectures will introduce a diverse range of topics in perception, decision making, learning and memory; and methods such as psychophysics, signal detection theory and neural network modeling. The computer labs will introduce scientific programming in Matlab based on realistic examples of psychological research. In the the class project, students will design their own experiment, and then implement and analyze it using Matlab. The integration of theory and practice in this class will help students learn the abstract theory and how to use computers to run and analyze their future experiments, such as in their Bachelor and Master projects.

This class is open to Bachelor students of other disciplines who would like to see mathematical and computational tools applied to the analysis and description of cognitive processes.

Proofs of academic achievement: Report, presentation

Discourse in Episodic Memory

Language: English

Department: Institute for Neural Computation
Contact: Prof. Dr. Sen Cheng, NB 3/33, phone: 29486, email: sen.cheng@rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: Seminar
Credit Points: 3
Teacher/Lecturer: Prof. Dr. Sen Cheng
Requirements: Knowledge of learning and memory at Bachelor level.

Room
NB 3/72

Day, Time
Monday, 14.00-16.00

Begin
24/04/2017

Course description:
When we remember events from our lives, whether they are the once-in-a-lifetime or everyday kind, we use our episodic memory. Although a small region of the brain called the hippocampus was dentified to be important for episodic memories a long time ago, the nature and neural basis of episodic memory remain unclear. This class will employ a novel, highly interactive format to introduce the students to the cutting edge of the research into episodic memory. Students will be involved in choosing the literature discussed in class and discuss their views with an invited speaker who will also give a scientific talk.
Dynamical Systems in Neuroscience

Department: Institute for Neural Computation
Contact: Dr. Amir Houssein Azizi, NB 3/70, phone: 27987, email: amir.azizi@ini.rub.de
Degree programme: Master
Module: -
Module taught entirely in foreign language: Yes
Course type: Lecture and Tutorial
Credit Points: 6
Teacher/Lecturer: Dr. Amir Houssein Azizi
Requirements: This course is for students in Physics, Mathematics, Applied Computer Science or Applied Informatics Sciences.

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<tr>
<th>Room</th>
<th>Day, Time</th>
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<tr>
<td>NB 3/72</td>
<td>Wednesday, 10.00-12.00</td>
<td>19/04/2017</td>
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<tr>
<td>NB 3/72</td>
<td>Wednesday, 14.00-16.00</td>
<td>26/04/2017</td>
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Course description:
Much of our understanding of the neurocomputational properties of brain cells comes from the pioneering studies of Hodgkin and Huxley in the late 40s. They build a detailed model of the membrane potential dynamics of neurons based on the conductivity of various ion channels. Later work on dynamical systems showed that different responses of cells with similar electrophysiology to input currents is due to different bifurcation mechanisms of excitability.

In this course we study the Hodgkin-Huxley (HH) model of neurons and introduce the analytical treatment of non-linear dynamical systems. We will then drive and study a typical reduced HH model analytically and determine different regimes of activity in such a system.

Proofs of academic achievement: Written examination
INTERDISCIPLINARY CENTRE FOR ADVANCED MATERIALS SIMULATION (ICAMS)

Microstructure and Mechanical Properties

Language: English

Department: Interdisciplinary Centre for Advanced Materials Simulation (ICAMS)
Contact: mss@icams.rub.de, phone: 023 32 29332
Degree programme: Master
Module: n.s.
Module taught entirely in foreign language: Yes
Course type: Lecture with exercises/seminar
Credit Points: 4
Teacher/Lecturer: Prof. Dr. Alexander Hartmaier

Requirements: Students must have completed the modules “Elements of Microstructure” and “Introduction to Statistical Physics and Thermodynamics” or equivalent.

Course description:
In this course students learn the principles of microstructure evolution during materials processing, its dependence on the materials composition and transport processes. They gain understanding of the correlation between microstructure and mechanical properties of materials by learning the microstructural mechanisms of deformation and failure. They develop the skills to apply this knowledge to materials science problems.

Proofs of academic achievement: written examination

This course is credited for „Optionalbereich“. This course is open for refugees taking part in preparatory courses.

Interfaces and Surfaces

Language: English

Department: Lehrstuhl/...
Contact: Dr. Thomas Hammerschmidt, Thomas.Hammerschmidt@rub.de
Degree programme: Master
Module: n.s.
Module taught entirely in foreign language: Yes
Course type: Lecture, practical exercises
Credit Points: 6
Teacher/Lecturer: Dr. Thomas Hammerschmidt, Dr. Rebecca Janisch
Requirements: Students must have successfully completed modules “Elements of Microstructure”, “Introduction to Quantum Mechanics in Solid State Physics” and “Assessment and Description of Materials Properties” or equivalent.

Room: ICAMS, IC 02/718 and CIP-pool IC 02/522
Day, Time: Monday, 10.15-12.00
Begin: 20/04/2017

Course description:
The course shall provide an understanding of the relevance of surfaces and interfaces in materials science. The goals are gaining basic knowledge of experimental and computational techniques to characterize surfaces/interfaces as well as understanding the relationship between atomistic descriptions of interfaces/surfaces and macroscopic materials properties, especially thermodynamic and mechanical properties (interface/surface energies, adsorption, segregation, interface mobility, interaction with other defects). The students will develop the relevant skills to choose the most suited approaches for specific questions and to apply them to material science problems.

Proofs of academic achievement: oral exam

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.

Quantum Mechanics in Materials Science

Language: English

Department: Lehrstuhl/...
Contact: Dr. Thomas Hammerschmidt, Thomas.Hammerschmidt@rub.de
Degree programme: Master
Module: n.s.
Module taught entirely in foreign language: Yes
Course type: Lecture and seminar
Credit Points: 4
Teacher/Lecturer: Prof. Dr. Ralf Drautz, Dr. Thomas Hammerschmidt

Requirements: Successful completion of “Introduction to Quantum Mechanics in Solid State Physics” or equivalent.

Room: ICAMS, IC 02/718 and CIP-pool IC 02/522
Day, Time: Monday, 8.30-10.00
Begin: 20/04/2017

Course description:
The course shall provide a basic understanding of quantum mechanics in materials science, which enables the students to study the current research literature. Furthermore it provides the required knowledge of quantum mechanics as the basis of performing electronic-structure simulations. The students will learn to understand the basics of wave mechanics and their relation to the electronic structure of materials. Students will be able to transfer this knowledge in order to
understand and use numerical methods for calculating the electronic structure of complex phases. They comprehend how the electronic structure influences the properties of materials.

**Proofs of academic achievement:** written examination

This course is credited for „Optionalbereich“.

This course is open for refugees taking part in preparatory courses.
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