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INTERNATIONAL COURSE CATALOGUE

WiSe 2012/13

Degree programmes, seminars and lectures
taught in English



INTERNATIONAL COURSE CATALOGUE

WiSe 2012/13

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 at 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.

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

CONTENT

THE RUHR-UNIVERSITÄT BOCHUM.....	4
SERVICE FOR INTERNATIONAL MEMBERS.....	5
RUBISS – RUB INTERNATIONAL STUDENT SERVICES.....	5
EXCHANGE PROGRAMMES	6
RESEARCH SCHOOL.....	9
WELCOME CENTRE FOR INTERNATIONAL RESEARCHERS.....	10
STUDYING AT RUB.....	11
DEGREE PROGRAMMES TAUGHT IN ENGLISH.....	11
DOUBLE AND JOINT DEGREES.....	15
LANGUAGE COURSES.....	17
APPLICATION AND ADMISSION.....	18
INTERNATIONAL SEMINARS AND LECTURES.....	19

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 5,000 employees and over 36,500 students from 130 countries. All the great scientific disciplines are united on one compact campus.

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. RUB won two projects in the very competitive German Excellence Initiative in June 2012: the interdisciplinary Research School and the Cluster of Excellence RESOLV ("Ruhr Explores Solvation) – Solvents as active units".

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 4000 international students, approx. 500 international PhD students and several hundred 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.

Consistent internationalisation is also the focus of our future concept "Research Campus RUB". 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 is also running liaison offices in New York and Rio de Janeiro with its neighbouring universities Dortmund and Duisburg-Essen as part of the University Alliance Metropolis Ruhr (UAMR). RUB changed to the Bachelor/Master system before any other German university and almost all degree programmes are therefore offered with the Bachelor and Master qualifications. RUB offers approximately 150 bachelor's and master's degree programmes in various combinations and it is an extremely cosmopolitan university: over 4,000 international students, postgraduate students from many different countries and more than 300 partner universities in the ERASMUS Programme play their part in this. Moreover, the university welcomes more than 400 visiting academics annually from all over the world.

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.
- At the RUB Research School, international PhD students are supervised by renowned research fellows from all faculties and are directly involved in international research.
- Internationally mobile researchers are welcomed and supported in RUB's Welcome Centre.

SERVICE FOR INTERNATIONAL MEMBERS

RUBISS – RUB 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. This is why "RUBiss – RUB International Student Services" was established at the International Office and now combines all offers and services for international students at RUB. You will find contact persons for other important issues which go beyond your academic studies, such as advice and support in social, cultural and university-related affairs, as well as support in the application and admission process or with administrative tasks and legal affairs concerning foreign nationals – there is always a sympathetic ear for you at RUBiss.

RUBiss offers:

- Support and advice on various matters
- Newsletter
- Intercultural tutors
- Events and excursions

Events and excursions:

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.

Every semester, members of staff from the International Office welcome the new international students to RUB at the International Welcome, accompanied by the Rector himself in the Winter Semester.

At the start of every semester, an Orientation Week is organised for international students. It takes place in the week before lectures start and is open to all new international students. Participation is free of charge.

RUBiss also provides offers that may be useful for your studies or your future career such as the DAAD-funded projects "Praktika International" and the "Rechtschreibkorrekturbüro"; the first offering workshops on finding and applying for internships, the latter offering a proof-reading service for final theses.

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.



RUBiss, International Office

Email: RUBiss@rub.de

Internet: www.international.rub.de/rubiss

Facebook-Gruppe: 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 250 partner universities all over Europe. Students can spend 3 - 12 months abroad in one of the 27 EU member states, Iceland, Norway, Switzerland, Liechtenstein, Croatia 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, Brazil
- Universidad de Monterrey, Mexico
- Universidad Autónoma de Nuevo León, Mexico
- Universidad Autónoma Metropolitana, Mexico
- Universidad Católica del Norte, Chile
- Lindenwood University in St.Charles, Missouri, USA
- National Taiwan University, Taiwan
- Ewha Womans University, Korea
- Soongsil University, Korea
- Sogang University, Korea
- Kyungpook National University, Korea
- Osaka University, 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
- Belorussian 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, 30 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:

Baylor University Waco, TX	Texas State University San Marcos, TX
Kansas State University Manhattan, KS	University of Missouri Kansas City, MO
Missouri University of Science & Technology Rolla, MO	University of Missouri St. Louis, MO
Oklahoma State University Stillwater, OK	University of Nebraska Kearney, NE

Southern Illinois University at Carbondale, IL	University of Nebraska Lincoln, NE
Texas Tech University Lubbock, TX	University of Nebraska Omaha, NE
University of Kansas Lawrence, KS	University of Oklahoma Norman, OK

b) AEN:

Deakin University Victoria	University of Tasmania Tasmania
Edith Cowan University Western Australia	University of Western Sydney New South Wales
Griffith University Queensland	University of Wollongong New South Wales
Macquarie University New South Wales	

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:

Slavonic Studies:

- Institute of European Cultures, Moscow, Russia
- Moscow State University of Railway Engineering, Russia
- Kursk State University, Russia
- Vologda State Pedagogical University, Russia
- Vologda State Technical University, Russia
- Belorussian State University Minsk, Belarus
- Simferopol State University, Ukraine

Faculty of Economics:

- Tongji University in Shanghai, China
- Nihon University in Tokyo, Japan

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
- Kwansai Gakuin University in Nishinomiya, Japan

Faculty of Civil and Environmental Engineering:

- Toyohashi University of Technology in Toyohashi, Japan
- Texas A&M University in College Station, USA

Faculty of Mechanical Engineering:

- Toyohashi University of Technology in Toyohashi, Japan
- Tongji University in Shanghai, China
- Texas A&M University in College Station, USA
- Drexel University in Philadelphia, USA

Faculty of Electrical Engineering and Information Technology

- Purdue University in West Lafayette, Indiana, USA
- Drexel University in Philadelphia, USA

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 Outgoing Exchange Student Services located at the International Office.

Incoming Exchange Student Services

International Office

Ruhr-Universität Bochum

Email: magdalena.bichmann@uv.rub.de

Theodoros.markakidis@uv.rub.de

Internet: www.international.rub.de/gaststudis

Outgoing Exchange Student Services

International Office

Ruhr-Universität Bochum

Email: veronika.fuckel@uv.rub.de (Europe and Latin America)

jonna.haensel@uv.rub.de (Asia)

uta.baier@uv.rub.de (Europe, North America and Australia)

Internet: www.international.rub.de/ausland

RESEARCH SCHOOL

The cross-faculty RUB Research School is the central campus hub for doctoral researchers on our campus. We welcome you as a doctoral researcher actively contributing to state-of-the-art research at Ruhr-Universität Bochum. During your doctorate at RUB (Dr. or PhD), you and your individual doctoral research project are supported by your supervisors and integrated into the international research environment of our 20 faculties. The RUB Research School offers an advanced qualification beyond borders, supports a seamless transition into the job market and offers advice for everyone who is going to start or complete a doctorate at RUB.

Pursuing a doctorate within the RUB Research School means researching in an international research environment, networking internationally, and receiving outstanding support for individual projects. Our doctoral students make an important contribution to research at RUB and take on research-oriented teaching responsibilities at an early stage.

Doctoral students of the RUB Research School work very independently on their own research dissertations. Every dissertation project is overseen by a supervisor and co-supervisor, with whom the student works closely. In our graduate school, there are uniform and obligatory quality standards for the conferral of a doctorate as well as rigorous prerequisites for admission to doctoral studies.

In addition to scientific excellence, RUB places a high value on providing young researchers and future leaders with a holistic education. That is why each doctoral student has access to a broad selection of courses that will help prepare them for their future international academic or professional careers.

The most unique feature of the graduate school is the intensive, interdisciplinary academic exchange, which lays the foundation for a stronger scholarly community on campus.

More than 600 Doctoral Candidates and about 450 Principal Investigators are yet part of this institution-wide and highly interdisciplinary research school at Ruhr-Universität Bochum.



Central Coordination Office
Research School
Ruhr-Universität Bochum
Dr. Ursula Justus
Email: ursula.justus@rub.de
Internet: <http://www.research-school.rub.de>

WELCOME CENTRE FOR INTERNATIONAL RESEARCHERS

The Welcome Centre is the place international academics, researchers, scientists and other university-related professionals and their families can go to seek advice, support and services regarding their research stay at Ruhr-Universität Bochum. We also offer advice and guidance to their hosts and faculties at RUB.

We assist researchers with the preparation for their trip and offer support during their stay in Bochum. We can provide them with information, recommendations and support regarding specific topics and areas that are relevant for their research stay in Bochum, including necessary residence and work formalities, as well as helpful hints for a smooth social integration and everyday life in Germany.

Services for international researchers and their families include:

- Internet portal in German and English
- Checklists for preparing for the stay and negotiating on the first days after arrival
- Advice on formalities (visa, registration, health insurance)
- Assistance in finding accommodation
- Support in dealings with the authorities (tutor service)
- Advice on legal matters
- Assistance in finding a kindergarten or school for your children
- International Lounge for visiting researchers
- Excursions and events for visiting scientists and scholars
- German language courses at various levels
- Online portal: International Researchers' Gallery

Welcome Centre Events

The Welcome Centre invites international researchers and their families to various events such as excursions throughout the region, the monthly “Coffee with the Rector” in the International Lounge, the monthly “International Women’s Exchange” and the Christmas and Summer Reception.

The Welcome Centre in Bochum is registered as a EURAXESS “local service point”. This is an EU-wide network providing information and advice for internationally mobile researchers.



Welcome Centre, International Office
Ruhr-Universität Bochum
Studierendenhaus
Email: welcome-centre@rub.de
Internet: www.rub.de/welcome-centre
Facebook: Welcome Centre RUB

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 notable universities:

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

Institute for 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 approx. €250 (per semester)

Special feature: Erasmus Mundus Programme

Contact: Dr. Ulla Pape. Phone: +49(0)234/32-28258, email: Ulla.Pape@ruhr-uni-bochum.de

More information: www.ifhv.de

European Master's Programme in Human Rights and Democratisation

Institute for International Law of Peace and Armed Conflict

Degree: Master of Arts (joint degree)

Application deadline: 31 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 €4000 (one-off payment), enrolment fee €130, application processing fee €50, RUB's social fee approx. €250 (per semester)

Special feature: first semester taught in Venice

Contact: Prof. Dr. Horst Fischer. Email: Horst.Fischer@ruhr-uni-bochum.de

More information: www.emahumanrights.org

The Master of Arts in Development Management

Institute of Development Research and Development Policy

Degree: Master of Arts (single degree)

Application deadline: 15 October for DAAD scholarship applicants for the programme "Postgraduate Courses with Relevance to Developing Countries"; 31 December for all other applicants. Note: the course takes place every two years.

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; career experience in a relevant field; proficiency in written and spoken English.**

Fees: RUB's social fee approx. €250 (per semester)

Special feature: DAAD scholarships available; twin programme in Cape Town, S.A.

Contact: Dr. Meik Nowak. Phone: +49 (0)234 / 32-22458, email: Meik.Nowak@ruhr-uni-bochum.de

More information: www.development-research.org/madm.html

Materials Science and Simulation MSS

Interdisciplinary Centre for Advanced Materials Simulation (ICAMS)

Degree: Master of Science (single degree)

Application deadline: Summer Semester (short track option): 15 March (EU citizens), 15 September (non-EU citizens). Winter Semester: 15 September (EU citizens), 15 March / 15 June (non-EU citizens)

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; adequate English language skills

Fees: RUB's social fee approx. €250 (per semester)

Special feature: supported by RUB's Rectorate via the programme "Master 2.0"

Contact: Prof. Dr. rer. nat Alexander Hartmaier. Phone: +49 (0)234/32-29314, email: mss@icams.rub.de

More information: www.icams.de/mss

Lasers and Photonics

Faculty of Electrical Engineering and Information Technology

Degree: Master of Science (single degree)

Application deadline: 15 July

Prerequisites: above-average Bachelor's degree (at least 6 semesters) in Electrical Engineering, Mechanical Engineering, Physics, Chemistry or similar; proof of knowledge of the English language.

Fees: RUB's social fee approx. €250 (per semester)

Special feature: supported by RUB's Rectorate via the programme "Master 2.0"

Contact: Biljana Cubaleska. Phone: +49 (0)234 32-29474, email: studienberatung@ei.rub.de

More information: www.ei.rub.de/studium/lap

Molecular and Developmental Stem Cell Biology

Faculty of Medicine

Degree: Master of Science (single degree)

Application deadline: 15 July

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, proof of English language skills at TOEFL test level.

Fees: RUB's social fee approx. €250 (per semester)

Special feature: supported by RUB's Rectorate via the programme "Master 2.0"

Contact: Prof. Dr. Brand-Saberi. Phone: +49 (0)234 32-24556, email: iSTEM@rub.de

More information: www.rub.de/istem

Molecular Sciences and Simulation (iMOS)

Faculty of Chemistry and Biochemistry

Degree: Master of Science (single degree)

Application deadline: 15 July

Prerequisites: A qualified B.Sc. (= a B.Sc. with an average mark better than 2.0 or international equivalent) in Chemistry, Physics, Biochemistry, Biology, Engineering or a related interdisciplinary subject; adequate English language skills. In case of more than 20 applicants a selection will take place.

Fees: RUB's social fee approx. €250 (per semester)

Special feature: supported by RUB's Rectorate via the programme "Master 2.0"

Contact: Dr. Gerhard Schwaab. Phone: +49 (0)234 / 32-24256, email: imos@rub.de

More information: www.rub.de/imos

Computational Engineering

Faculty of Civil and Environmental Engineering

Degree: Master of Science (single degree)

Application deadline: 1 May

Prerequisites: above-average Bachelor's (or comparable) degree in Civil Engineering, Mechanical Engineering or a related engineering field. Students who have a Bachelor's degree in Computer Science will not be accepted. Very good English language skills.

Fees: RUB's social fee approx. €250 (per semester)

Special feature: twin programme is taught 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: <http://compeng.rub.de>

Geosciences – Energy and Resources

Faculty of Geosciences

Degree: Master of Science (single degree)

Application deadline: 15 July

Prerequisites: B.Sc. in Geosciences or related Natural Sciences, English language proficiency (written and spoken) and sufficient physical fitness to perform fieldwork

Fees: RUB's social fee approx. €250 (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: <http://www.gmg.rub.de/studium/studgang>

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

Fees: RUB's social fee approx. €250 (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

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

Fees: RUB's social fee approx. €250 (per semester)

Contact: Prof. Dr. Gerald Dyker. Phone: +49 (0)234 / 32-24551, email: gerald.dyker@ruhr-uni-bochum.de

More information: www.chemie.ruhr-uni-bochum.de/studium/master/biochemie

Master of Science in Economics

Faculty of 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 at least six semesters of regular period of study (180 ECTS). At least 30 ECTS credits in economics and a minimum of 10 ECTS credits in statistics/econometrics and mathematics. Please note that courses in business (administration), marketing or management do not count towards the minimum economics requirement.

Fees: RUB's social fee approx. €250 (per semester)

Contact: Ruth Hoekstra. Phone: +49 (0)234 32 28993, email econmaster@rub.de

More information: www.rub.de/econmaster

DOUBLE AND JOINT DEGREES

Several double and joint degree programmes provide the opportunity to obtain the degree of a partner university alongside the RUB-degree:

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 other university. The 5th semester is spent in Tours by all students, the 6th in Bochum.

Contact:

Name: Prof. Dr. Gerhard Lubich
Email: Gerhard.lubich@rub.de

Name: Stephanie Caspari
Email: Stephanie.b.caspari@rub.de

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

After spending time at the partner university during the last year of their studies, students gain the Spanish Licenciatura degree and the German Master degree.

Contact:

Name: Lidia Santiso Saco
Email: lidia.saco@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 Master's Degree in Gender Studies with the University of Graz

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: Stephanie Sera
Email: GenderStudies@rub.de

Double Bachelor's / Master's Degree in German Studies

Possibility to obtain a Bachelor's as well as a Master's degree from Ruhr-Universität Bochum and Universiteit Utrecht at the same time, without prolonging study time.

Contact:

Name: [Prof. Dr. Bernd Bastert](mailto:Prof.Dr.Bernd.Bastert)
Email: Bernd.Bastert@rub.de

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. Bernahrd Pellens
Email: pellens@iur.rub.de

Double Master's Degree of the Faculty of Mechanical Engineering with the CDHK at Tongji University, Shanghai

Double degree in production techniques that can be obtained by German and Chinese students (studying at both locations).

Contact:

Name: Prof. Dr.-Ing. Horst Meier
Email: Meier@lps.rub.de

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 spent two semesters together in Bochum and two in Tours.

Contact:

Name: Dr. Geoffrey Juchs
Email: geoffrey.juchs@rub.de

Name: Véronique Müller
Email: Veronique.Mueller@rub.de

Double Master's Degree 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 are awarded a Master's degree of both RUB and Université Tours.

Contact:

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

Joint Master's Degree in Humanitarian Action (NOHA)

After successfully completing all programme components students will be awarded a Joint Dipolma in International Humanitarian Action from the home and host universities.

Contact:

Dr. Ulla Pape (IFHV).
E-mail: Ulla.Pape@rub.de
www.ifhv.de

Joint Master's Degree Film and Audiovisual Media

Integrated studies in four different European countries, at key media and media studies locations

Contact:

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

Name: Jasmin Stommel
Email: Jasmin.Stommel@rub.de

Double Master's Degree in Deutsches, Türkisches und Internationales Wirtschaftsrecht

Joint Master programme of Ruhr-Universität Bochum and Kültür Universität Istanbul in German and Turkish. Takes place in Istanbul.

Contact:

Name: Yesim Ülker-Can
Email: deut-tuerk-wima@rub.de
www.rub.de/deut-tuerk-wima

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 20 different languages, such as: Arabic, Catalan, Chinese, Danish, Dutch, English, French, Italian, Japanese, Modern Greek, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish and Turkish.

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, there are a lot of courses that may be taken during the semester alongside regular studies. These courses are designed for the special needs of foreign students, PhD students and guest researchers.

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® (English, French, Italian, Polish, Russian, Swedish, Spanish)

DELE (Spanish)

CNaVT (Dutch)

Swedex (Swedish)

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: www.rub.de/zfa

Bochum Institute of Intensive Language Training (LSI – Landesspracheninstitut)

This institute offers intensive language courses for Spanish, 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

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 of the Goethe-Institut
- German language diploma, level II, of the Goethe-Institut
- TestDaF with the grades 4 x 4 or 16 points

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: 15/05 - 15/07

Application period, summer semester: 15/11 - 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 or other foreign languages.

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

CENTRE FOR RELIGIOUS STUDIES.....	20
FACULTY OF BIOLOGY AND BIOTECHNOLOGY.....	21
FACULTY OF EAST ASIAN STUDIES.....	31
FACULTY OF ECONOMICS.....	33
FACULTY OF LAW.....	36
FACULTY OF MATHEMATICS.....	38
FACULTY OF MEDICINE.....	39
HEART AND DIABETES CENTER NRW.....	47
FACULTY OF PHILOLOGY.....	49
ENGLISH DEPARTMENT.....	49
INSTITUTE FOR MEDIA STUDIES.....	50
FACULTY OF PHILOSOPHY AND EDUCATIONAL RESEARCH.....	51
EDUCATION DEPARTMENT.....	51
PHILOSOPHY DEPARTMENT.....	52
FACULTY OF PHYSICS AND ASTRONOMY.....	61
FACULTY OF PSYCHOLOGY.....	63
FACULTY OF SOCIAL SCIENCE.....	72
INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY.....	89
INSTITUTE FOR NEURAL COMPUTATION.....	94
INTERDISCIPLINARY CENTRE FOR ADVANCED MATERIALS SIMULATION (ICAMS).....	97

CENTRE FOR RELIGIOUS STUDIES

POSTSECULARISM IN EUROPEAN AND ASIAN CONTEXTS

Language: English

Department: CERES

Degree programme: Master

Contact: Isomae, Jun`ichi, icb74921@nifty.com

Module: Systematically Religious Studies

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Isomae, Jun`ichi

Requirements: -

Room	Day, Time	Begin
GABF 05/707	Thursday, 14-16	2012-10-11

Course description:

Nowadays, scholars of religion like Talal Asad, Jose Casanova and William Connolly, have come to criticize secularism in European and American societies. Formerly Enlightenment thinkers applauded secularism for providing a neutral and peaceful space to their societies in order to resolve the struggles between diverse religious groups. But presently, secularism is recognized to have conspired with the notion of religion (in particular that of Protestantism) in that secularism designates religion as the private sphere vis-a-vis the secular as the public sphere, in order for the two to coexist together as two items within the same dichotomy. In particular, the secular is deeply intertwined with the notion of publicness in Western society, which Hannah Arendt and Jürgen Habermas have studied. Now the local historicity of secularism which derives from European tradition becomes obvious when considered against the cases of not only Islam but also Asian religions, which have always appropriated Western secularism. These cases drive us to reconsider the validity of contemporary secular society. In our seminar, at first we will examine the diversity of secularism in the West in order to follow the works of Jürgen Habermas and Charles Taylor. Then we shall consider how Asian societies (Turkey, India and Japan) have appropriated Western secularism in their indigenous contexts. Finally, we shall rethink the possibility of dislocating secularism in the contemporary globalized situation in order to envisage a new form of community which transforms the concept of publicness. In this sense this seminar hopes to lay the foundations for all students who wish to study religions in terms of postsecularism, which urges us to rethink protestant and enlightenment values.

Proofs of academic achievement: Presentation, term paper

FACULTY OF BIOLOGY AND BIOTECHNOLOGY

SCIENCE MEETING / MITARBEITERSEMINAR: AKTUELLE FORSCHUNGSPROJEKTE

Language: English

Department: Faculty of Biology and Biotechnology, Geobotany, ND 03/174

Contact: Prof. Dr. Dominik Begerow, phone 0234-32-27212, Email: dominik.begerow@rub.de

Degree programme: n.s.

Module: n.s.

Course type: Seminar

Credit Points: 1

Teacher/Lecturer: Prof. Dr. Dominik Begerow

Requirements: Own research in the field of Evolutionary Mycology

Room	Day, Time	Begin
ND 1 / 58	Wednesday 15:00 – 16:00	by arrangement

Course description:

Exchange on research concepts, progress report and discussion of new results.

Proofs of academic achievement: Written examination

COLLOQUIUM: ACTUAL RESULTS IN CELL BIOLOGY AND MOLECULAR NEUROBIOLOGY

Language: english

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: any

Module: n.s.

This module taught entirely in English.

Course type: seminar

Credit Points: 1.0

Teacher/Lecturer: Prof. Dr. A. Faissner, Prof. Dr. S. Wiese, Dr. U. Theocharidis, Dr. N. Brösicke, Dr. J. Reinhard

Requirements: none

Room	Day, Time	Begin
ND 05 / 392	Mon, 9:15 - 10:30	continously

Course description:

Scientists from the department present actual research results.

Proofs of academic achievement: oral presentation

ADVANCED TUTORIAL (S-MODULE): SIGNALLING PATHWAYS UND GTPASES

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. N. Brösicke, Dr. J. Reinhard, V. Luft, A. Ulc, S. van Leeuwen

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement.		

Course description:

Our working group is strongly interested in signal transduction pathways and their control by protein tyrosin phosphatases and GTPases during CNS development and disease progression. Several projects focus on the guanine nucleotide exchange factor (GEF) Vav3 in neural stem cells and oligodendrocyte precursor cells. GEFs mediate the exchange of a G-protein with GTPase activity from a GDP- into a GTP-bound state, which enables cell cycle progression, cytoskeletal changes and gene expression.

Previous studies showed that Vav3-deficient mice display a hyperactivation of the sympathetic nervous system and develop tachycardia, cardiovascular defects and renal dysfunctions. In addition, the loss of Vav3 leads to a transient delay in cerebellar development and profound defects in dendrite branching of Purkinje and granule cells. In order to investigate the potential role of Vav3 in different aspects of stem cell development, e.g. proliferation and differentiation, we analyse Vav3 deficient mice. In addition we are interested in GTPases and their potential role in tumors and tumor stem cells of the CNS. Another project focuses on the potential functional role of the protein tyrosin phosphatase Meg2 (PTP-Meg2) in eye diseases and early retinal development. As a genetic tool we perform studies in transgenic PTP-Meg2 knock-out mice.

Proofs of academic achievement: seminar, literature seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): STEM CELL BIOLOGY OF SENSORY SYSTEMS

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. N. Brösicke

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The visual system represents a well-studied system of developmental neurobiology. The laboratory has begun to study the expression and functions of the neural extracellular matrix (ECM) in the developing retina and visual cortex to obtain new insights into the roles of these components during development. Thus, the glycoprotein tenascin-C of the ECM modulates the proliferation of the retinal stem cell pool. Investigations of structure and functions of the neural ECM in the developing retina represent an ongoing research question. Potential tenascin-C receptors, e.g. the receptor protein tyrosinephosphatase RPTP- β/ζ , have been studied in more detail. This resulted in a research line that focused on the expression of tyrosin phosphatases in the developing retina in general. Systematic screenings uncovered the cytoplasmic tyrosine phosphatase PTP-Meg2 as a promising target for further analysis. Currently, the development and pathology of the eye are studied in the PTP-Meg2 knock-out model. Müller glia is analyzed as a potential stem cell of the retina and its potential for retina regeneration is explored. In a parallel approach, induced human pluripotent stem cells (iPSCs) are investigated for the potential to differentiate into retinal stem cells. Overall, our studies aim to establish new tools for the repair of the retina and visual cortex in defined lesion models.

Proofs of academic achievement: seminar, literature seminar, written protocol

MODERN METHODS IN LIFE SCIENCES: VIDEO MICROSCOPY AND CONFOCAL LASER SCANNING MICROSCOPY

Language: ger / en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: PhD

Module: n.s.

This module taught entirely in English.

Course type: introductory course

Credit Points: 1 / 1,5 / 2

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. A. Klausmeyer, Dr. U. Theocharidis, Dr. N. Brösicke, J. Reinhard

Requirements: Master degree

Room	Day, Time	Begin
according to prior agreement		

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: n.s.

ADVANCED TUTORIAL (S-MODULE): BIOTECHNOLOGICAL METHODS IN MOLECULAR NEUROBIOLOGY

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. U. Theocharidis, Dr. N. Brösicke, S. van Leeuwen

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The module focuses on the molecular basis of developmental neurobiology. Using molecular biological and biotechnological methods, various aspects of cellular and molecular neurobiology can be elucidated. Objectives are the production and the molecular genetics of expression constructs and recombinant expression of proteins for use in cell culture and protein biochemical analysis. In addition, primary cells and cell lines are genetically manipulated and examined for the molecular and cellular biological effects. Using concrete examples bioinformatical techniques in the form of database analysis and sequence comparisons are carried out. The independent development and implementation of cloning strategies are learned and nurtured.

Methods: RT-PCR, cloning, plasmid purification, transfection, protein expression, Western blot, in situ hybridization, chromatin immunoprecipitation, dual-luciferase promoter binding studies, immunocyto-/histochemistry

Proofs of academic achievement: seminar, literature seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): NEURON-GLIA-INTERACTION

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. U. Theocharidis, C. Gottschling, L. Roll, E. Lugo

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The last decades have shown that radial glia and astrocytes play important roles in the regulation of development, plasticity and regeneration of the CNS. For example, early astrocytes construct complex temporary scaffolds that guide migrating neurons and growth cones. Astrocytes are important functional elements of the tripartite synapse and intervene in synaptic structure and activity. On the other hand, glial cordons segregate neuronal assemblies and interfere with axonal regeneration in glial scars. The laboratory has established a research line that characterizes glia-derived extracellular matrix (ECM) molecules with regard to their roles in axon growth and guidance, and in the realm of inhibition of regeneration and the glial scar. This work resulted in the identification of repulsive and stimulatory domains in the ECM glycoprotein tenascin-C, and in the definition of the neurite outgrowth promoting DSD-1-carbohydrate epitope. Currently, the laboratory focuses on complementary peptide domains in ECM components and their receptors. Recently, the team has developed an interest in perineuronal nets (PNNs) that represent specialized and condensed ECM superstructures on the surface of neurons. Current research aims at elucidating the roles of PNNs for synaptic function and plasticity. To this end, an in vitro system to monitor synapse formation has been established and is analyzed using amongst others multi-electrode arrays (MEAs)

Proofs of academic achievement: seminar, literature seminar, written protocol

SEMINAR / LITERATURE CLUB: ACTUAL PUBLICATIONS IN MOLECULAR AND CELLULAR NEUROBIOLOGY

Language: en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: any

Module: n.s.

This module taught entirely in English.

Course type: seminar

Credit Points: 1,0

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. N. Brösicke, Dr. J. Reinhard, Dr. U. Theocharidis

Requirements: n.s.

Room	Day, Time	Begin
NDEF 05/392	Thursday, 16:45	continuously

Course description:

Students and scientists from the department present actual publications in molecular and cellular neurobiology

Proofs of academic achievement: oral presentation

ADVANCED TUTORIAL (S-MODULE): TRANSCRIPTION FACTORS AND REGULATION OF NEURAL STEM CELLS

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. U. Theocharidis

Requirements:

GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The module addresses the molecular basis of gene regulation of neural stem cells. The focus lies on the influence of the extracellular matrix of the developing nervous system and the regulation of matrix proteins. Issues are inter alia the primary culture of stem cells of the nervous system and their immunocytochemical and molecular biological analysis. Expression studies and genetic manipulations are carried out. In addition to histochemical studies an analysis of the developing nervous system and the neural stem cell niches will be performed. Transcription factors in neural development and the proteins of the extracellular matrix are in the focus.

Methods: Preparation of neural tissue for cell culture, video microscopy, immunocytochemistry with application of fluorescence techniques, RT-PCR, Western blot, in situ hybridization, immunohistochemistry, dot blot in vitro hybridization, Southern blot, chromatin

immunoprecipitation, Dual-Luciferase Promotor Assaya, cloning, plasmid purification, transfection

Proofs of academic achievement: seminar, literature seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): ANALYSIS OF PROTEIN TYROSIN PHOSPHATASES IN NEURAL STEM CELLS OF THE VISUAL SYSTEM

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. J. Reinhard

Requirements:

GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The module deals with cell and molecular biological studies on the development of the visual system and neural stem cells of mammals. One focus is the role of Phosphotyrosinphosphatases in this context. It will cover following items: primary culture of neural stem and retinal ganglion cells , culture defined glial cell lines, immunocytology with defined neural antigens in the visual system and the brain, using immunofluorescence techniques, fluorescence and confocal laser scanning microscopy, biochemical studies, characterization of expressed genes, Western blot, immunoprecipitation, biochemical and molecular characterization of receptor phosphotyrosine phosphatases in neural stem cells and the visual system, transfection and ectopic expression of PTPs, functional assays in co-culture systems and the analysis of functions and properties of retinal stem cells.

Proofs of academic achievement: seminar, literature seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): TUMOR STEM CELLS AND BIOLOGY OF GLIAL TUMORS

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. N. Brösicke

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The course focuses on the study of cellular and molecular aspects of tumor formation in the nervous system. It uses the culture of glial tumor cell lines and defined neural immunocytological antigens of the extracellular matrix and the cytoskeleton, immunofluorescence techniques and laser scanning microscopy, immunological studies of tumor cell lines and studies of ECM in primary tumors (in cooperation). An investigation of the neural regulation of extracellular matrix in tumor cells by cytokines by ELISA and Western blot is possible as well as profiling of receptor genes in tumor cell systems, analysis of integrins, PTPs and ECM glycoproteins, cell biological assays for proliferation, adhesion and migration of tumor cells, and finally the video microscopy of tumor cells of the nervous system.

Proofs of academic achievement: seminar, literature seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): NEURAL STEM CELLS

Language: ger/en

Department: Cell Morphology and Molecular Neurobiology

Contact: Professor Dr. Andreas Faissner, Tel: 0234/32-28851, Email: andreas.faissner@rub.de

Degree programme: BSc / MSc

Module: n.s.

This module taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. N. Brösicke, Dr. J. Reinhard, Dr. U. Theocharidis, M. Jagatheaswaran, M. Jarocki, V. Luft, M. May, V. Luft, L. Roll, A. Ulc

Requirements: GMP passed

basic module in cell or neurobiology, biochemistry or microbiology passed

lecture in cell or neurobiology attended

Room	Day, Time	Begin
according to prior agreement		

Course description:

The CNS originates from a layer of neuroepithelial cells that expand by symmetric division. With increasing thickness of the walls of the neural tube the neuroepithelium evolves to radial glia (RG). These proliferate and self-renew by symmetric division, but progressively give rise to neurons that are generated in an asymmetric division mode. Thereby, radial glia cells do give rise to neurons in vitro and serve as neural stem/progenitor cells (NSPCs). Following neurogenesis, oligodendrocyte precursors are formed and migrate to target regions to myelinate the axonal connections. Finally, the radial glia recedes and transforms into astrocytes, with two well-known exceptions, the Bergman glia of the cerebellum and the Müller glia of the retina. In the adult CNS, neurogenesis is limited to two canonical regions, that is the subventricular zone (SVZ) of the lateral ventricle and the subgranular zone (SGZ) of the hippocampus. There, progeny of the radial glia is thought to reside as radial-type astrocytes in the subventricular zone of the lateral ventricle and the subgranular zone of the dentate gyrus of the hippocampus, where these cells serve as stem cells for neurogenesis in the adult CNS. It is widely accepted that these neurogenic territories harbour specialized environments that sustain NSPCs and are regarded as niches which function as integrative entities for a large number of physiological stimuli. The topics of our laboratory focus on the expression of extracellular molecules in glial tumors and their potential effects on tumor stem cells of the nervous system, the response of the stem cell niche to lesions and the potential use of stem cells for regeneration and repair of the CNS.

Proofs of academic achievement: seminar, literature seminar, written protocol

LECTURE SERIES IN BIOTECHNOLOGY

Language: English

Department: various

Degree programme: Master of Science in Biology

Module: Lecture Series in Biotechnology

This module taught entirely in English.

Course type: Lecture Series

Credit Points: none

Teacher/Lecturer: various; coordinator Prof. Dr. Nicole Frankenberg-Dinkel

Requirements: Bachelors Degree in Biology or related disciplines

Room	Day, Time	Begin
ND2/99	Wednesday, 12.00-13.30	10/10/2012

Course description:

Lecture series in biotechnology is taught by various members of the faculties of biology and biotechnology and medicine. It covers all modern aspects of white, green, blue and red biotechnology and will also highlight biotechnology research projects of the faculty.

Proofs of academic achievement: regular attendance

This course is especially suitable for exchange students.

JOURNAL CLUB

Language: English

Department: Cell Physiology

Degree programme: Bachelor/Master/PhD

Contact: sabrina.baumgart@rub.de

Module: n.s.

This module taught entirely in English.

Course type: seminar

Credit Points: 2

Teacher/Lecturer: Prof. Hatt, Dr. S. Baumgart

Requirements: n.s.

Room	Day, Time	Begin
ND 4/74-75	each Friday, 9.00-10.00	October 2012

Course description:

Discussion of newest publications in the field

Proofs of academic achievement: regular and active presence

This course is especially suitable for exchange students.

RESEARCH ACTIVITIES / PROGRESS REPORTS (190589)

Language: English

Department: Animal Physiology

Contact: Prof. Dr. H. Lübbert, 0234-32-24338, tierphysiologie@rub.de

Degree programme: any

Module: n.s.

This module taught entirely in English.

Course type: seminar

Credit Points: 1.0

Teacher/Lecturer: Prof. Dr. H. Lübbert, colleague

Requirements: none

Room	Day, Time	Begin
ND 5/63	by arrangement	by arrangement

Course description:

Scientists from the department present actual research results.

Proofs of academic achievement: oral presentation

FACULTY OF EAST ASIAN STUDIES

FOREIGN POLICIES AND IR IN EAST ASIA

Language: English

Department: Faculty of East Asian Studies/East Asian Politics

Contact: Niall Duggan, 0234-32-29828, nail.duggan@rub.de

Degree programme: Master

Module: Foreign and Security Policy in East Asia

This module is taught entirely in English.

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: Dr. Niall Duggan

Requirements: Bachelor Degree in Economics and Politics of East Asia or in consultation with the lecturer

Room	Day, Time	Begin
GABF 04/409	Tuesday 4pm to 6 pm	09/10/2012

Course description:

This ASO will examine the formation and implementation of foreign policy in the East Asian context. Employing both foreign-policy analysis and international relations theory, the seminar will highlight how domestic and international factors influence the actions of the nation-states of East Asia on the global stage. Following a general introduction to different approaches to the study of foreign-policy analysis and international relations, including how to conduct research in this area, the seminar will focus on the areas of economic and (traditional and non- traditional) security cooperation by examining a number of East Asian case studies. This course will provide an opportunity to improve your English and to develop the skills required for an international career.

Proofs of academic achievement: Written examination

HISTORY ISSUES IN EAST ASIA SINCE THE 1980s

Language: English

Department: Faculty of East Asian Studies/East Asian Politics

Contact: Szczepanska Kamilla, 0234-32-26446, Kamila.Szczepanska@rub.de

Degree programme: Master

Module: Governments and Institutions of East Asia

This module is taught entirely in English.

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: Dr. Kamila Szczepanska

Requirements: Bachelor Degree in Economics and Politics of East Asia or in consultation with the lecturer

Room	Day, Time	Begin
GABF 04/509	Wednesday 10am to 12am	10/10/2012

Course description:

Communicative level of English to read, discuss and present argument during the class is required. Participation in module will help students to develop presentation and communication skills in English at advanced level. Although Japanese language materials will be included in reading list, knowledge of Japanese language is not essential to participate in the module. Students that are on the Chinese track of studies are welcomed to attend the classes.

<http://rub.de/poa/de/lehre/wise2012/>

Since the 1980s a wide range of issues relating to colonial and wartime past in East Asia have gained increasing saliency in relations between Japan, the PRC and South Korea.

The module will explore the matters of apology and compensation, textbook representations of the Asia-Pacific War, 'comfort women' issue and national attitudes towards the difficult past in the region among the others. Special emphasis will be put on discussing how subsequent Japanese governments handled the matter of the country's wartime past both in domestic and international spheres. Nevertheless we will also examine the emergence and transformation of Chinese and Korean discourses on the Asia-Pacific War. During the class we will critically investigate not only policies and measures undertaken by relevant governments, but also initiatives relating to addressing the wartime past in East Asia that emerged from the level of civil society.

The main objectives of the module are threefold: 1) to provide students with extended knowledge on a set of unresolved conflicts over the past in the region and influence that these matters still have on relationships between Japan and its closest neighbours today, and 2) to encourage critical analysis of academic arguments concerning the 'history issue' in the region.

Proofs of academic achievement: Written examination

FACULTY OF ECONOMICS

CONTEMPORARY ISSUES IN CORPORATE GOVERNANCE

Language: English

Department: Chair of Accounting and Auditing

Degree programme: Bachelor

Contact: Khaled Kholmy, +49 (0) 234 32 - 26181, Khaled.kholmy@rub.de

Module: Contemporary Issues in Corporate Governance

This module is taught entirely in English.

Course type: Seminar

Credit Points: 5 ECTS

Teacher/Lecturer: Dr. Jürgen Ernstberger / Dipl.-Ök. Khaled Kholmy

Requirements: A basic knowledge of accounting and finance is required. Limited to 10 students.

Room	Day, Time	Begin
GC 2 / 57	tba	8 th October 2012

Course description:

The purpose of the course is to discuss contemporary issues in German and international corporate governance (e.g. international differences in corporate governance, stakeholder conflicts, enforcement, and compliance). Participants should explain and assess specific corporate governance mechanisms as well as new regulations in this area. Students should gain experience in writing scientific papers and presenting the main results. Maximum number of participants: 10. Please contact Khaled Kholmy (khaled.kholmy@rub.de) for further details.

Proofs of academic achievement: Seminar paper (60%), Presentation of the main result and participation in the class discussion(40%)

This course is especially suitable for exchange students.

ECONOMETRIC EVALUATION OF ECONOMIC POLICIES

Language: English

Department: Chair for Empirical Economics

Contact: Sebastian Otten, Phone: +49-234 32 27523 E-Mail: sebastian.otten@rub.de

Degree programme: Master

Module: Econometric Evaluation of Economic Policies

This module is taught entirely in English.

Course type: Lecture and Seminar

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Thomas K. Bauer

Requirements: Bachelor Degree in Economics.

Room	Day, Time	Begin
RWI Essen	Friday 14.00-16.00	19/10/2012

Course description:

After participation, the students should be able to understand the newest econometric techniques developed for the evaluation of economic policies. They should understand their basic identification strategy, the necessary data to implement these strategies as well as the main problems of these strategies. The module aims to give the students the necessary skills to read and understand the scientific literature in this area and to give a critical assessment of empirical evaluation studies.

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

ECONOMICS OF TAXATION

Language: English

Department: Fakultät für Wirtschaftswissenschaft

Degree programme: BSc in Management and Economics

Contact: Prof. Dr. Robledo, +49/234/32-22888, appliedmicro@rub.de

Module: Economics of Taxation

This module is taught entirely in English.

Course type: Lecture (2h) plus tutorial (2h)

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. Robledo and assistants

Requirements: Good knowledge of basic microeconomic theory, good command of English.

Room	Day, Time	Begin
HZO 60	Tuesday 12-14	09.10.2012
HZO 100	Wednesday 12-14	10.10.2012

Course description:

The module covers standard public economics taxation topics at an undergraduate level: incentive effects of taxation, excess burden of taxation, commodity taxation, income taxation, fiscal federalism, fiscal competition, tax evasion.

Proofs of academic achievement: Exercises and written examination.

MICROECONOMIC THEORY

Language: English

Department: Fakultät für Wirtschaftswissenschaft

Degree programme: MSc in Management and Economics, MSc in Economics

Contact: Prof. Dr. Robledo, +49/234/32-22888, appliedmicro@rub.de

Module: Microeconomic Theory

This module is taught entirely in English.

Course type: Lecture (4h) plus tutorial (2h)

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. Robledo and assistants

Requirements: Good knowledge of basic microeconomic theory, good command of English.

Room	Day, Time	Begin
HGC 20	Wednesday 10-14	10.10.2012
HGC 40	Thursday 12-14	11.10.2012

Course description:

The module covers standard microeconomic topics at an advanced master level: consumer choice, production and costs, competitive markets, general equilibrium, efficiency and welfare theorems.

Proofs of academic achievement: Exercises and written examination.

ECONOMICS OF INNOVATION

Language: English

Department: Fakultät für Wirtschaftswissenschaft

Degree programme: MSc in Management and Economics, MSc in Economics

Contact: Prof. Dr. Robledo, +49/234/32-22888, appliedmicro@rub.de

Module: Economics of Innovation

This module is taught entirely in English.

Course type: Lecture plus tutorial plus seminar

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. Robledo and assistants

Requirements: Good knowledge of basic microeconomic theory, good command of English.

Room	Day, Time	Begin
GC 03/42	Tuesday 16-20	09.10.2012
GBCF 04/614	Thursday 10-12	11.10.2012

Course description:

The module covers from a microeconomic perspective how information and knowledge wie Information und Wissen entstehen und welche Anreize die Entstehung von Wissen fördern. Themen sind u.a.: intellectual property (IP), IP protection (patents), IP design, cumulative research, licensing, knowledge sharing, open source software.

Proofs of academic achievement: Exercises, written examination, seminar paper.

FACULTY OF LAW

THINKING AND WRITING LIKE A LAWYER (SHOULD)

Language: English

Department: Dean of the Faculty of Law

Degree programme: Bachelor/Master

Contact: Katrin Giesen, 0234/32-27681, katrin.giesen@rub.de

Module: n.s.

Module taught entirely in English.

Course type: lecture

Credit Points: 3

Teacher/Lecturer: Katrin Giesen

Requirements: proficient English

Room	Day, Time	Begin
t.b.a.	4 Alternative dates; t.b.a.	October

Course description:

It is the main objective of the course to improve the written and oral English skills of students. During the course, students will learn how to express themselves in plain English language. The course will include drafting exercises (letter of advice to client, legal research memorandum to partner) and the improvement of oral skills (presentation skills, client interview and negotiation, introduction to mooting). The course will be taught by providing theoretical knowledge, and then practicing the acquired skills by way of drafting and oral presentations and discussions.

Proofs of academic achievement: Written assessment: drafting a client letter, plus oral assessment: a choice of negotiation or presentation in class

This course is especially suitable for exchange students.

INTRODUCTION TO UK CONTRACT LAW

Language: English

Department: Faculty of Law

Degree programme: Bachelor/Master

Contact: Katrin Giesen, 0234/32-27681, katrin.giesen@rub.de

Module: n.s.

Module taught entirely in English.

Course type: lecture

Credit Points: 3

Teacher/Lecturer: Lisa Gow, LLB

Requirements: proficient English

Room	Day, Time	Begin
TBA	TBA (2 or 3 parallel units)	October 2012

Course description:

This intensive unit gives students an introduction to UK law of contract, in particular formation, implementation and remedies for breach.

Proofs of academic achievement: written exam plus short oral presentation

This course is especially suitable for exchange students.

INTRODUCTION TO UK CONSTITUTIONAL LAW (INTENSIVE UNIT)

Language: English

Department: n.s.

Degree programme: Bachelor/Master

Contact: Katrin Giesen, 0234/32-27681, katrin.giesen@rub.de

Module: n.s.

Module taught entirely in English.

Course type: lecture

Credit Points: 3

Teacher/Lecturer: Lisa Gow, LLB

Requirements: proficient English

Room	Day, Time	Begin
TBA	intensive unit, one week	t.b.a.

Course description:

The objective of this course is to introduce students to the institutions, key concepts and recent developments in United Kingdom constitutional law. Unlike most modern democracies, such as Germany, the UK does not have a “written constitution”. British constitutional rules and doctrines have evolved over hundreds of years and are found in a number of different sources, rather than one single document. Students will first learn about the principal institutions of government and the sources of UK constitutional law. The next stage of the course will focus on the fundamental constitutional doctrines of parliamentary sovereignty, the separation of powers and the rule of law, as well as the supervisory role of the courts. Towards the end of the course, we will discuss the constitutional significance of more recent developments, including membership of the European Union, devolution to Scotland, Northern Ireland and Wales and the Human Rights Act 1998.

Proofs of academic achievement: There will be two assessments: a two-hour written exam (in English) at the end of the course. The exam will consist of a series of short-answer questions. The second assignment will be a short essay (also in English), which will encourage students to reflect on a specific topic from the course. This will be submitted two weeks after the end of the course.

This course is especially suitable for exchange students.

FACULTY OF MATHEMATICS

MATHEMATICAL ASPECTS OF DIFFERENTIAL EQUATIONS AND NUMERICAL MATHEMATICS

Language: English

Department: Faculty of Mathematics

Degree programme: Master

Contact: Prof. Dr. Gerhard Röhrle, 0234-32 28304, Gerhard.Roehrle@rub.de

Module: -

Course type: Lecture

Credit Points: -

Teacher/Lecturer: Prof. Dr. Gerhard Röhrle

Requirements: -

Room	Day, Time	Begin
NC 6/99 and NB 6/99	Wednesday 11-13 and Thursday 11-13	October 10th, 2012

Course description:

As its title suggests, this lecture is about the mathematical aspects of differential equations and numerical analysis. Special emphasis is given to foundational mathematical concepts and their uses. The main topics of this lecture include: Aspects of linear algebra, The method of steepest descent, One-dimensional FEM (toy) models, Green's Theorem.

Proofs of academic achievement: -

FACULTY OF MEDICINE

STEM CELL PHYSIOLOGY I

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Prof. Dr. Beate Brand-Saberi, Beate.Brand-Saberi@rub.de

Module: Stem Cell Physiology

This module is taught entirely in English.

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Brand-Saberi, Hofmann, Mannherz

Requirements: Life science related Bachelor

Room	Day, Time	Begin
MA 5/61	Fr. 10:15-11:45am	12.10.12

Course description:

Students are introduced to the principles and chronology of vertebrate development, cell cycle control, the concepts of reproductive medicine as well as vertebrate and invertebrate stem cell biology.

BIOINFORMATICS

Language: English

Department: Department of Biophysics, Biochemie II - Molekulare Neurobiochemie

Degree programme: M.Sc.

Contact: PD Dr. Mathias Lübben, Mathias.Luebben@ruhr-uni-bochum.de

Module: Bioinformatics

This module is taught entirely in English.

Course type: Lecture and practical Assignments

Credit Points: 5

Teacher/Lecturer: Lübben, Mosig, Stoll

Requirements: life science related Bachelor

Room	Day, Time	Begin
ND 3/99	Fr. 08:15-09:45am	12.10.12

Course description:

Introduction to bioinformatics, role of computers and of the internet for life sciences. Construction, use and integration of DNA- and protein-related databases. Bioinformatics search tools, search algorithms, profile and motif searches. Homology search of sequences (FASTA,

BLAST) and special applications (PHI- and PSI-BLAST), statistical significance analysis of results. Construction of genomes, genes and proteins; splicing. Analysis of DNA and protein data by means of freely available and proprietary software tools; virtual cloning. Strategies of genome sequencing (microorganisms and higher organisms), “Next generation” sequencing methods; genome annotation. Comparison of DNA and protein sequences, binary and multiple sequence alignment, Needleman-Wunsch algorithm, dynamic programming, position-specific weight matrices and Hidden Markov models. Phylogenetic tree construction by distance matrix and by parsimony analysis, maximum likelihood methods, split- and quartet-based methods for phylogenetic network inference. Transcriptomics and proteomics: Analysis of the degree of utilization of genetic information by the cell (RNA and protein). Methods of structure determination for proteins (X-ray crystallography, NMR spectroscopy), structure validation (Pro-Check). Structural genomics, strategies of “structure factories”. Use of RNA secondary structure prediction tools, introduction to RNA homology search and annotation. Motif discovery and motif search for transcription factor binding site modeling and recognition. Use of motif discovery and motif finding tools, and databases with transcription factor binding site profiles. Prediction of protein structures (secondary structure, neural networks, hydrophobicity analysis). Protein fold prediction, threading, homology modeling. Use of molecular graphics, application of viewers (RASMOL, PYMOL). Molecular mechanics, energy minimization and molecular dynamics.

Proofs of academic achievement: written exam

STEM CELL LECTURE SERIES

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Prof. Dr. Beate Brand-Saberi, Beate.Brand-Saberi@rub.de

Module: Stem Cell Lecture Series

This module is taught entirely in English.

Course type: Lecture

Credit Points: 2

Teacher/Lecturer: various, including guest lecturers

Requirements: life science related Bachelor

Room	Day, Time	Begin
to be announced	Tue 5:15-6:00pm	16.10.12

Course description:

Acquisition of an overview about views, problems and current topics in stem cell research, introduced by various researchers. A comprehensive list of the guest lecturers and given talks will be made available beforehand.

Proofs of academic achievement: written exam

STEM CELL PRACTICAL COURSES

Language: English

Department: various

Degree programme: M.Sc.

Contact: Irmgard Dietzel-Meyer, Irmgard.D.Dietzel-Meyer@rub.de

Module: Stem Cell Practical Courses

This module is taught entirely in English.

Course type: Practical

Credit Points: 4x4; 16 points in total

Teacher/Lecturer: Adamietz/Bühler; Brand-Saberi/Yusuf, Brand-Saberi/Chankiewicz, Heumann/Chakrabarty, Heumann/Neumann, Heumann/Pape, Jaquet, Köller, Linke/Unger, Mirmohammadsadegh, Petrasch-Parwez, Steinsträsser, Wang/Napirei, Wiese

Requirements: life science related Bachelor

Room	Day, Time	Begin
1 st meeting lecture hall ND	Wed 10.10.12 from 02:15pm introductory meeting	22.10.12

Course description:

Students will become familiar in theory and practice with specific techniques related to stem cell biology and have the competence to apply them as required.

Proofs of academic achievement: lab reports, poster presentations/seminar talks, completion of practical tasks

LANGUAGE COURSE I

Language: course-dependent

Department: ZFA

Degree programme: M.Sc.

Contact: Tel.: +49 (0)234 32 28182, Fax: +49 (0)234 32 14942, E-Mail: zfa@rub.de

Module: Language Course

Course type: Lecture

Credit Points: 2,5 to 5

Teacher/Lecturer: various

Requirements: life science related Bachelor

Room	Day, Time	Begin
course dependent	course dependent	course dependent

Course description:

Students of the Master of Molecular and Developmental Stem Cell Biology will achieve at least English language proficiency to meet the international standards of scientific work and

communication such as understanding written and spoken scientific (and technical) English and to present data without problems.

For students who have a very good command of English, it is recommended to choose a language course in German depending on previous knowledge. If the student is able to document sufficient skills in both German and English, the student is free to choose another language course. In this case it is recommended to choose languages of relevance in case the student wants to participate in the exchange program (Danish, Chinese etc.).

Specialized technical language courses allow advanced students to polish their professional vocabulary and communication skills

Proofs of academic achievement: written exam

ADVANCES IN STEM CELL RESEARCH

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Prof. Dr. Beate Brand-Saberi, Beate.Brand-Saberi@rub.de

Module: Lab Bench Project and Grant Writing

This module is taught entirely in English.

Course type: Lecture

Credit Points: 2

Teacher/Lecturer: n.s.

Requirements: life science related Bachelor

Room	Day, Time	Begin
to be announced	Tue 4:15pm-5:00pm	16.10.12

Course description:

The students will get acquainted with relevant topics in stem cell research by gaining an advanced insight into relevant research fields and identifying relevant research methods. They obtain a knowledge of funding agencies.

Proofs of academic achievement: written research proposal from the Lab Bench Project and Grant Writing module

PATHOLOGY OF DEGENERATIVE DISEASES

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Dr. Markus Napirei, Markus.Napirei@rub.de

Module: Pathology of Degenerative Diseases

This module is taught entirely in English.

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Brand-Saberi, V. + E. Chankiewitz, Dermietzel, Faustmann, Mügge, Napirei, Terras, Petrasch-Parwez, Yusuf, Guest Lecturers

Requirements: life science related Bachelor

Room	Day, Time	Begin
MA 5/61 Lecture	Mo 12:00am-02:00pm	08.10.12
	Wed 12:00am-02:00pm	

Course description:

Students know the microscopic and macroscopic morphology of five organ systems and the pathology of related degenerative diseases of these organs.

- the locomotory system
- the cardiovascular system
- the nervous system
- the sensory system (the eye)
- the hepatopancreatic system

Students have an up-to date overview of stem cell-related therapies, which are state of the art or even are theoretically planned.

Proofs of academic achievement: written exam

BIOETHICS INCLUDING LEGAL ASPECTS

Language: English

Department: Biochemie II - Molekulare Neurobiochemie, Angewandte Ethik

Degree programme: M.Sc.

Contact: Prof Dr. Heumann, rolf.heumann@rub.de

Prof. Dr. Steigleder, klaus.steigleder@rub.de

Module: Scientific Responsibility in Biomedicine

This module is taught entirely in English.

Course type: Lecture

Credit Points: 3

Teacher/Lecturer: Steigleder, Guest lecturers

Requirements: life science related Bachelor

Room	Day, Time	Begin
NC 2/99	Thu 09:00-11:00am	11.10.12
	every two weeks	

Course description:

Bioethics:

Students will be enabled to understand the peculiarities of normative questions and moral problems, to recognize moral problems in different areas of applied ethics, to acquire knowledge about the contributions of different moral theories to current controversies in biomedical ethics. They will be able to identify the strengths and weaknesses of different theories, become aware of the morally relevant points concerning one's own research activity and area of research, to reflect on the moral problems concerning one's own research activity and to discuss these problems with others.

Legal aspects:

Students will be able to differentiate biosafety levels (1-4) in laboratories where GMOs are handled and assembled; including technical safety precautions on every level, based on the GenTG. They can analyse and identify different biosafety relevant organisms with regard to the biosafety level.

They can explain biological safety precautions and impact on the environment and can plan experiments with regard to the biosafety levels and rules, based on GenTG and genetic engineering safety regulation (GenTSV).

They will be able to plan licensing procedures for biosafety laboratories and genetic engineering. They can furthermore describe and explain duties of responsible persons working in a genetic engineering laboratory (e.g. Biosafety Officer, project manager) and describe the assignment of duties to the relevant staff.

Recognise and explain the German Stammzell Gesetz (StZG). Explain and observe limits of StZG.

Proofs of academic achievement: feedback on the lectures and active participation

LAB BENCH PROJECT AND GRANT WRITING

Language: English

Department: various

Degree programme: M.Sc.

Contact: Prof Dr. Heumann, rolf.heumann@rub.de

Module: Lab Bench Project and Grant Writing

This module is taught entirely in English.

Course type: Practical

Credit Points: 14

Teacher/Lecturer: all the PIs of the International Master Program Molecular and Developmental Stem Cell Biology

Requirements: life science related Bachelor

Room

to be announced

Day, Time

to be announced

Begin

to be announced

Course description:

The students will be enabled to plan, perform and interpret lab experiments choosing from a range of particular methods to solve a particular task. They will also be able to design a research proposal for a suitable funding source.

Proofs of academic achievement: written research proposal

STEM CELL PHYSIOLOGY I

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Prof. Dr. Beate Brand-Saberi, Beate.Brand-Saberi@rub.de

Module: Stem Cell Physiology

This module is taught entirely in English.

Course type: Seminar

Credit Points: n.s.

Teacher/Lecturer: Brand-Saberi, Hofmann, Mannherz

Requirements: Life science related Bachelor

Room	Day, Time	Begin
MA 5/61	Fr. 10:15-11:45am	12.10.12

Course description:

Students are introduced to the principles and chronology of vertebrate development, cell cycle control, the concepts of reproductive medicine as well as vertebrate and invertebrate stem cell biology. During the seminar, students have to present research articles reflecting the current state of research topics introduced during the lecture.

Proofs of academic achievement: graded seminar talks

PATHOLOGY OF DEGENERATIVE DISEASES

Language: English

Department: Anatomie und Molekulare Embryologie

Degree programme: M.Sc.

Contact: Dr. Markus Napirei, Markus.Napirei@rub.de

Module: Pathology of Degenerative Diseases

This module is taught entirely in English.

Course type: Seminar

Credit Points: n.s.

Teacher/Lecturer: Brand-Saberi, V. + E. Chankiewicz, Dermietzel, Faustmann, Mügge, Napirei, Terras, Petrasch-Parwez, Yusuf, Guest Lecturers

Requirements: life science related Bachelor

Room	Day, Time	Begin
MA 0/582	Mo 03:00pm-05:00pm	08.10.12

Course description:

Students know the microscopic and macroscopic morphology of five organ systems and the pathology of related degenerative diseases of these organs.

- the locomotory system
- the cardiovascular system
- the nervous system
- the sensory system (the eye)
- the hepatopancreatic system

Students have an up-to date overview of stem cell-related therapies, which are state of the art or even are theoretically planned.

The seminar will allow students to test their understanding of the topic by presenting and analysing histological specimens themselves.

Proofs of academic achievement: n.s.

LAB BENCH PROJECT AND GRANT WRITING

Language: English

Department: various

Degree programme: M.Sc.

Contact: Prof Dr. Heumann, rolf.heumann@rub.de

Module: Lab Bench Project and Grant Writing

This module is taught entirely in English.

Course type: Seminar

Credit Points: n.s.

Teacher/Lecturer: n.s.

Requirements: life science related Bachelor

Room	Day, Time	Begin
t.b.a.		

Course description:

The students will be enabled to plan, perform and interpret lab experiments choosing from a range of particular methods to solve a particular task. They will also be able to design a research proposal for a suitable funding source.

Proofs of academic achievement: n.s.

HEART AND DIABETES CENTER NRW

The Heart and Diabetes Center North Rhine Westphalia is located in Bad Oeynhausen, Germany, and is one of the University Hospitals of the Ruhr University in Bochum (www.hdz-nrw.de). It is one of the largest heart centers in Europe with the world's leading heart transplant and artificial heart program. Educational programs for students and physicians take place here regularly with great dedication.

Pathobiochemistry of Heart Failure

Language: English

Department: Heart & Diabetescenter NRW (HDZ-NRW)/Clinic for Cardiovascular Surgery/Klessmann-Institute for Cardiovascular Research and Development

Contact: Hendrik Milting, MSc, PhD (hmilting@hdz-nrw.de)

Degree programme: n.s.

Module: not part of a module

Course type: Seminar

Credit Points: n.s.

Teacher/Lecturer: Priv.-Doz. Dr. Hendrik Milting

Requirements: n.s.

Room	Day, Time	Begin
Marco Polo Heart and Diabetes Center Bad Oeynhausen	According to arrangement	

Course description:

The seminar deals with novel experimental work on heart failure. A special focus is the biochemical effects and genetic mechanisms leading to inherited cardiomyopathies. A second topic is the consequences of mechanical circulatory support in patients with terminal heart failure.

Proofs of academic achievement: n.s.

This course is especially suitable for exchange students. Yes

Basic Lecture Heart Surgery

Language: English

Department: Heart & Diabetescenter NRW Bad Oeynhausen (HDZ-NRW)/Clinic for Cardiovascular Surgery (www.hdz-nrw.de)

Contact: Thomas Puehler, MD (tpuehler@hdz-nrw.de)

Degree programme: none

Module: Seminars on heart surgery

This module is taught only partly in English.

Course type: Lecture

Credit Points: n.s.

Teacher/Lecturer: Professor Gummert, Thomas Puehler, MD and colleagues

Requirements: none

Room	Day, Time	Begin
Marco Polo Heart and Diabetes Center Bad Oeynhausen	According to arrangement	

Course description:

The course aims to learn about clinical base knowledge for heart surgery. The main topics of the course are bypass and valve surgery, rhythm, transplant and artificial heart surgery. The number of participants is limited up to 20 students. The course will last for 1 week and practical exercises will be offered at the bedside in parallel sessions.

Proofs of academic achievement: oral examination

FACULTY OF PHILOLOGY

ENGLISH DEPARTMENT

www.rub.de/anglistik

Apart from a few exceptions all courses offered by the English Department are taught in English.

The different courses cover topics in the field of **American Cultural Studies, British Cultural Studies, American Literature, British Literature** and **Linguistics**.

Topics which could be particularly useful and interesting for exchange students are provided in courses of the modules **Language Practice** (i.e. Translation, Communication, Grammar) and **English for Special Purposes** (i.e. Legal English or Business 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: 9am – 13pm

Phone: 0234/32-22589

Email: anglistik@rub.de

INSTITUTE FOR MEDIA STUDIES

SELECTED READINGS IN MEDIA-ESTHETICS AND MEDIA-PRAGMATICS

Language: English

Department: Institute for Media Studies

Contact: Prof. Dr. Peter M. Spangenberg, GB 5/150, Phone: 0234/32-27632, E-Mail: peter.spangenberg@rub.de

Degree programme: Bachelor

Module: n.s.

This module is taught entirely in English.

Course type: Seminar

Credit Points: n.s.

Teacher/Lecturer: Prof. Dr. Peter M. Spangenberg

Requirements: none

Room	Day, Time	Begin
GABF04/611	Monday, 10-12	15.10.2012

Course description:

In this course a number of texts relevant for media studies and communication theory will be presented and discussed. Following the development of German media studies the seminar will focus on some of the key-figures of our discipline – like Walter Benjamin – and on some specific contributions to our field like the theory of culture industry – Theodor W. Adorno – or the sociological media theory – Niklas Luhmann.

Established fields of research like cultural studies, pragmatics and esthetics of virtual reality as well as more recent points of interest like actor network theory – Bruno Latour – will also be taken into consideration. The working language of this course will be English, which includes all the readings and presentations of the students. Texts and other seminar material will be made available online (Blackboard).

Proofs of academic achievement: presentation, term paper

This course is especially suitable for exchange students.

FACULTY OF PHILOSOPHY AND EDUCATIONAL RESEARCH

EDUCATION DEPARTMENT

EDUCATIONAL DEVELOPMENTS IN COMPARATIVE PERSPECTIVES

Language: English

Department: Chair of Comparative Education

Degree programme: Bachelor of Arts (B.A.)/Master of Educational (M.Ed.)

Contact: Dr. Ute Lange, GA 1/133, Tel. 0234/32-24982, E-Mail: ute.lange@rub.de, Consultation hours: Tuesdays and Thursdays, 4-6 p. m.

Module A5: Internationale Bildungsentwicklungen und Interkulturelle Pädagogik

Module taught only partly in English

Course type: Hauptseminar

Credit Points: 4 CP (+ 3 CP for extended course paper)

Teacher/Lecturer: Prof. Dr. Christel Adick

Room	Day, Time	Begin
GABF 04/356	Tuesday, 10.00 – 12.00	09/10/2012

Course description:

The main aims of the seminar are: (a) to raise awareness of some educational topics which are commonly debated around the world, and (b) to introduce research-oriented learning methods for enquiries on global developments in education.

In the first part some internationally debated issues will be discussed, such as peace education, discrimination in education in the European Union, teacher training, global models of education, etc. (Articles will be available in Blackboard). Participants will have to present a summary of one of these articles, in class to a group of fellow-students (peer instruction), which will then be followed by a plenary discussion of the respective article.

In the second part of the course the websites of the UNESCO will be screened for general information on Education for All (EFA), definitions of empirical indicators (e.g. Gender Parity Index, Education Development Index) and available data on educational enrolments in practically all the countries of the world. Participants will be asked to bring their laptops, if available, in order to conduct online research in class. Our research will then concentrate on educational developments in the newly emerging countries, the so-called "BRIC" countries (Brazil, Russia, India and China), which are the four largest economies outside the OECD, comprising more than 40% of the world's population. Groups will be formed who have the task to compile country profiles by using data of the UNESCO, OECD, World Bank and other sources. The country profiles will then be presented and discussed in plenary (presentation by powerpoint/handouts).

For the proof of academic achievement ('Kleine Studienleistung'/4 CP) students are expected to actively participate in the peer-teaching and the group work described above. Each student has to submit a paper on education in one of the countries which have been discussed in class (academic paper incl. references), which will be graded. Topics for an additional extended course paper (Hausarbeit, 3 CP) will be discussed individually. Course papers may be written either in English or German.

The course is especially suitable for exchange students.

PHILOSOPHY DEPARTMENT

PERCEPTION AND ACTION

Language: English

Department: Philosophy Department

Degree programme: Bachelor/ Master

Contact: Jun.Prof. Dr. Tobias Schlicht, 0234/32-29479, tobias.schlicht@rub.de

Module: WM IIa, WM IIIa

This module is taught entirely in English

Course type: Seminar

Credit Points: 4/6

Teacher/Lecturer: Jun.Prof. Dr. Tobias Schlicht

Requirements: Knowledge in philosophy of cognition

Room	Day, Time	Begin
GABF 04/358	Thursday 12-14	11.10.2012

Course description:

According to a classical model in cognitive science, perceiving, thinking and acting are distinct mental faculties. In computational language, they can be decomposed into an input layer (perception), and output layer (action), and a mediating layer (thinking, cognition). However, recent developments in the cognitive sciences call this classical model into question and suggest a more intimate and complex relationship between these faculties. In this seminar, we discuss several philosophical views of perception and relate them to empirical approaches. Central questions will be whether and in what sense perception is passive or active; whether it is direct or indirect; whether it involves representations, and if yes, how they should be characterized; what role the body, embodiment and action play for perception and how philosophical theories of perception relate to empirical work and theories of perception.

The target group of the seminar are BA students in their second and third year, Master students both from Philosophy and the new course MA cognitive science. Psychology students are also welcome. The seminar will be held in English. All interested students should thus have an interest in the topic, a reasonable command of the English language and some preliminary knowledge about cognitive science. For any questions contact tobias.schlicht@rub.de.

Proofs of academic achievement: -

RADICAL ENACTIVISM

Language: English

Department: Philosophy Department

Degree programme: Bachelor/ Master

Contact: Jun.Prof. Dr. Tobias Schlicht, 0234/32-29479, tobias.schlicht@rub.de

Module: WM IIa, WM IIIa

This module is taught entirely in English

Course type: Blockseminar

Credit Points: 4/6

Teacher/Lecturer: Jun.Prof. Dr. Tobias Schlicht

Requirements: Knowledge in philosophy of cognition

Room	Day, Time	Begin
??	??	??

Course description:

Enactivism is a view about cognition, according to which all cognition is essentially an activity, i.e. action-involving. It is also closely related to the claims that cognition is essentially embodied and embedded. That is, cognition has to be explained in terms of the dynamics between mind/brain, body and world. Proponents of this view criticize the dominant representational approach to mental phenomena, calling for a paradigm shift in the cognitive sciences.

The basis of this seminar will be the book *Radicalizing Enactivism. Basic Minds without Content* (MIT Press 2013), written by Dan Hutto (Hertfordshire) and Erik Myin (Antwerp). This book, which is not yet published, is already available for the students electronically and we will engage with it in the context of a workshop (October 22-24) at RUB in which Hutto and Myin will present and discuss their manuscript with us in the form of several talks. In preceding sessions in September (dates to be determined by the participants) and a concluding session before Christmas we will read and discuss the text and develop presentations in English. This is supposed to prepare students to engage with state-of-the-art research and to practice giving a philosophical talk. About the book:

Most of what sentient beings do and experience is best understood in terms of dynamically unfolding interactions with the environment. Many philosophers and cognitive scientists now acknowledge the critical importance of situated, environment-involving embodied engagements as a means of understanding basic minds – including basic forms of human mentality. Yet many of these same theorists hold fast to the view that all minds are necessarily or essentially contentful – that they represent conditions the world might be in. In this book, Hutto and Myin promote a radically enactive, embodied approach to cognition which holds that some kinds of minds – basic minds – are neither best explained by processes involving the manipulation of contents nor inherently contentful. The authors oppose the widely endorsed thesis that cognition always and everywhere involves content. They defend the counter-thesis that there can be intentionality and phenomenal experience without content and demonstrate the advantages of their approach for thinking about scaffolded minds and consciousness.

The target group of the seminar are BA students in their second and third year, Master students both from Philosophy and the new course MA cognitive science. Psychology students are also welcome. All interested students should have an interest in the topic, a reasonable command of the English language and some preliminary knowledge about cognitive science. For any questions contact tobias.schlicht@rub.de.

Proofs of academic achievement: -

FOUNDATIONS OF ETHICS AND ECONOMICS ETHICS

Language: English

Department: Philosophy Department

Degree programme: Bachelor/ Master

Contact: Prof. Dr. Klaus Steigleder, 0234/32-22719, klaus.steigleder@rub.de

Module: WM IIb/ WM IIIb

This module is taught entirely in English

Course type: Lecture

Credit Points: 4/ 6

Teacher/Lecturer: Prof. Dr. Klaus Steigleder

Requirements: -

Room	Day, Time	Begin
HGA 30	Tuesday, 16-18	09.10.2012

Course description:

Diese Vorlesung ist eine Veranstaltung des Masterstudiengangs „Ethics – Economics, Law and Politics“, die auch von Studierenden der Philosophie besucht werden kann. Die Unterrichtssprache ist voraussichtlich Englisch.

Die Vorlesung hat zwei Teile. Im ersten Teil steht die Frage im Vordergrund, welchen Status moralische Normen besitzen und ob und gegebenenfalls wie moralische Normen begründet werden können. Dabei sollen vor allem Versuche vorgestellt und geprüft werden, die moralische Normen auf die Klugheit der Handelnden zurückzuführen versuchen. Nach dieser Auffassung stellen moralische Normen wechselseitige Einschränkungen des Eigeninteresses der Handelnden dar, die letztlich aber im wohlverstandenen Eigeninteresse der Handelnden liegen. Im zweiten Teil der Vorlesung werden unterschiedliche Ansätze der Wirtschaftsethik vorgestellt und diskutiert.

In Fortführung des Stoffs der Vorlesung biete ich im Sommersemester ein Seminar „Current Problems of Economic Ethics“ an, das konkrete Problemstellungen der Wirtschaftsethik behandelt.

Proofs of academic achievement: -

LOGIK-ONLINE-KURS

Language: English

Department: Philosophy Department

Degree programme: Bachelor

Contact: Prof. Dr. Albert Newen, 0234/32-22139, albert.newen@rub.de

Module: WM Ia

This module is taught entirely in English

Course type: Online-Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Albert Newen

Requirements: -

Room	Day, Time	Begin
GABF 04/609	11.10.+13.12.2012, 31.01.2013, 12-14	11.10.2012

Course description:

Studying logics, we study formal rules of inferences and thus the core instrument of science. These rules are important for reasoning not only in philosophy but in any scientific discipline; they can also be used for the reconstruction and analysis of arguments of others. Thus, logic and theory of argumentation figure among fundamental philosophical sub-disciplines. The main goal of this course is to give a systematic introduction to logic, mainly focusing on propositional logic and (first order) predicate logic. Formal methods will be explained and applied - the main goal being to use logic for other philosophical targets and to highlight some aspects of logic that are of philosophical significance themselves.

There will be three sessions (in the room mentioned above): 11.10.2012, 13.12.2012 and 31.01.2013 (written examination).

The online-course has weekly online-material that the students should read. Then there are weekly online-tutorials to answer open questions and to prepare the weekly online-tests. The course is credited when the weekly online-tests as well as the written examination are passed.

Proofs of academic achievement: -**MORALITY AND LAW****Language:** English**Department:** Philosophy Department**Degree programme:** Bachelor/ Master**Contact:** Prof. Dr. Corinna Mieth, 0234/32-22748, corinna.mieth@rub.de**Module:** WM IIc/ WM IIIc

This module is taught entirely in English

Course type: Seminar**Credit Points:** 4/ 6**Teacher/Lecturer:** Prof. Dr. Corinna Mieth**Requirements: -**

Room	Day, Time	Begin
GABF 04/716	Thursday, 16-18	11.10.2012

Course description:

It is one of the oldest and most vexing problems of philosophy to determine what the relation between morality and law is. There is a long list of difficult questions, such as: Is law a part of morality or totally distinct from it? If it is distinct, what is normative ground of law; if it is a part of morality, what distinguishes it from other branches of morality? Does law need to be moral or at least have moral aims in order to deserve to be called law or is it just a positively set of rules backed up by force? Is it allowed or even required to break immoral or even only dysfunctional

laws? Is human rights law really law, although it is not enforceable? We will explore the relation between morality and law along the following three questions that will give structure to the seminar: 1. What is the relationship between morality and law? 2. Is law founded in morality 3. What is the foundation of human rights?

Proofs of academic achievement: -

MATACOGNITION: PHILOSOPHICAL AND PSYCHOLOGICAL PERSPECTIVES

Language: English

Department: Philosophy Department

Degree programme: Bachelor/ Master

Contact: Jun.Prof. Dr. Tobias Schlicht, phone 0234/32-29479, tobias.schlicht@rub.de

Module: Name WM IIc

This module is taught entirely in English

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Santiago Arango-Munoz

Requirements: -

Room	Day, Time	Begin
GABF 04/358	Thursday, 14-16	11.10.2012

Course description:

This seminar aims to revise the contemporary philosophical and psychological literature on metacognition in order to provide students with a broad understanding of the main discussions and research methods in this area. So, the main questions that the seminar will address will be: What is metacognition from the philosophical and the psychological points of view? What's the relation between metacognition and mindreading? What's the relation between metacognition and emotion? Which feelings are metacognitive? Are non-human animals and children endowed with this capacity?

The course is directed to students who wish to acquire basic knowledge in this domain from a multidisciplinary point of view. We will read and discuss recent papers that present and discuss central positions on the topics listed above. Some basic knowledge in philosophy of mind and/or cognitive science is desirable. The seminar, the texts, the discussions and evaluations will be in English.

Proofs of academic achievement: -

THEORIES OF EMOTIONS

Language: English

Department: Philosophy Department

Degree programme: Bachelor

Contact: Prof. Dr. Albert Newen, Tel. 0234/32-22139, albert.newen@rub.de

Module: Name WM IIc

This module is taught entirely in English

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Dr. Leon de Bruin

Requirements: -

Room	Day, Time	Begin
GAFO 02/373	Tuesday, 14-16	09.10.2012

Course description:

What are emotions? Are we to understand emotions as inner experiences, neural affect programs, bodily sensations, or rational judgments? Are emotions a natural phenomenon, or are they socially constructed? To what extent is our everyday concept of emotions representative for that of other cultures? And what do the sciences tell us about emotions? In this course we discuss the most important theories of emotions.

Proofs of academic achievement: -

THEORIES OF KNOWLEDGE AND REPRESENTATION

Language: English

Department: Philosophy Department

Degree programme: Master

Contact: Prof. Dr. Albert Newen, Tel. 0234/32-22139, albert.newen@rub.de

Module: Name WM IIIa

This module is taught entirely in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Albert Newen

Requirements: -

Room	Day, Time	Begin
GABF 04/253	Thursday, 10-12	11.10.2012

Course description:

Knowledge and Representation are core concepts in cognitive science. In the seminar we want to unfold the philosophical debate that belongs to both concepts and aim at characterizing the most fruitful way of understanding these notions in the context of learning abilities.

Knowledge is traditionally understood as justified, true belief. Detailed analysis by Gettier, Goldman, Dretske show that this notion needs modifications to account for our intuitions that knowledge is a mental state of being adequately informed about states of the world that also tend to trigger goal-directed behavior. While the traditional analysis of knowledge focused on knowing-that, in cognitive science we also need an analysis of knowing-how: The philosopher Ryle ("The concept of mind") argues that knowing-that and knowing-how are radically different types of knowledge; this initiated a debate how to adequately describe knowing-how. We plan to read some main proposals relating the debate to empirical studies. Almost any theory of knowledge is

grounded on a theory of representation. What is mental representation and do we really have to presuppose mental representations to account for the behavioral and cognitive abilities? These questions have two aspects: on the one hand, we will discuss different views on characterizing representations before we, on the other hand, also deal with the radical proposals that want to analyze and explain cognitive abilities independent from any representations.

Proofs of academic achievement: -

CURRENT PROBLEMS IN THE PHILOSOPHY OF PERCEPTION

Language: English

Department: Philosophy Department

Degree programme: Master

Contact: Prof. Dr. Markus Werning, Tel: 0234-32-24734, markus.werning@rub.de

Module: Name WM IIIb

This module is taught entirely in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Markus Werning

Requirements: -

Room	Day, Time	Begin
GA 04/187	Thursday, 12-14	11.10.2012

Course description:

Perceptions are often regarded as the prototypical instances of phenomenal consciousness. They are thereby often contrasted with conceptual states that we face in cognition and language comprehension. However, is it true that perceptions are non-conceptual? Do their contents fundamentally differ from the contents of cognitive states? How could they then be epistemically related to cognitive states, how could they serve as the basis of logical inferences? Still the phenomenal quality of perceptions, for many philosophers, seems to withstand any reduction to conceptual structures. However, do perceptions exhibit some of the essential features of conceptual structures at least, namely, systematicity and compositionality? Are there phenomenal concepts? Is it true to say that perceptions are so different from conceptual states because they are informationally encapsulated in modules? How do perceptions relate to illusions and hallucinations? Do we have to appeal to some sort of disjunctivism?

These and other questions will be of concern to us in the seminar. They will be dealt with on the basis of up-to-date research literature. Participants are expected to take over a presentation. All texts and discussions will be in English. Students will receive active support with regard to active and passive English language skills.

Proofs of academic achievement: -

COMPACT COURSE - PHILOSOPHY OF SOCIAL SCIENCE

Language: English

Department: Philosophy Department

Degree programme: Master

Contact: Prof. Dr. Corinna Mieth, 0234/32-22748, corinna.mieth@rub.de

Module: WM IIIb

This module is taught entirely in English

Course type: Compact Course

Credit Points: 6

Teacher/Lecturer: Dr. Christian Neuhäuser

Requirements: -

Room	Day, Time	Begin
GABF 04/358	05.-08.02.2013, 10-19	Monday, 08.10.2012, 10-12

Course description:

In this seminar we will consider the interdisciplinary nature of the master EELP, by asking what the difference between philosophy and social science is and what they have in common. A good way to approach this question is by doing philosophy of social science that is by asking what the nature and purpose of social science is. By engaging in a philosophical discussion of social science the different angles of philosophy and social science will become more visible.

Proofs of academic achievement: -

PHILOSOPHY AND THE COGNITIVE SCIENCES: LANGUAGE AND CONCEPTS

Language: English

Department: Philosophy Department

Degree programme: Master

Contact: Prof. Dr. Albert Newen, 0234/32-22139, albert.newen@rub.de

Module: WM IIIc

This module is taught entirely in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Albert Newen, Prof. Dr. Maarkus Werning

Requirements: -

Room	Day, Time	Begin
GA 04/187	Thursday, 16-18	18.10.2012

Course description:

The colloquium will offer regular presentations given partly by Bochum MA and PhD students and partly by external guests. The presentations will all be in the general domain of theoretical philosophy and the cognitive sciences with a focus on language and concepts. The presentations should ideally, but not necessarily have some interdisciplinary dimension such that perspectives from philosophy, psychology, linguistics and neurosciences can be systematically interconnected. The aim of the colloquium is to offer a platform for the discussion of ongoing research and to

support the education of students at the Master and PhD level. Students who are accepted for a presentation in this seminar will receive a special training in preparing presentations in English.

PhD-students who are interested in presentations should write an email to both organizers (albert.newen@rub.de and markus.werning@rub.de) and come to the first meeting. The semester program will be fixed then. PhD-students can receive 2 credit points for an active participation. MA students can receive 4-6 CP for a presentation in the colloquium (to receive a mark, MA students have to write an additional essay). Topics can be freely chosen such that MA students can develop a talk in the area of their MA project (Ein avisiertes Masterprojekt kann selbstverständlich im Anschluss in deutscher Sprache ausgearbeitet werden).

The colloquium welcomes Master and PhD-students in philosophy, linguistics, psychology, and cognitive neurosciences

Proofs of academic achievement: -

LOGIC AND REASONING IN NATURAL LANGUAGE

Language: English

Department: Philosophy Department

Degree programme: Bachelor

Contact: Prof. Dr. Markus Werning, 0234/32-24734, markus.werning@rub.de

Module: WM IIa

This module is taught entirely in English

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Maria Sychalska

Requirements: -

Room	Day, Time	Begin
GA 04/187	Tuesday, 16-18	09.10.2012

Course description:

In the seminar we will discuss logic as a device of reasoning. We will focus on reasoning with quantifiers, particularly syllogistic reasoning, conditional reasoning (i.a., causal reasoning, Wason-selection task), and reasoning with negation. We will draw a distinction between logical and pragmatic inference in natural language, briefly presenting the basic problems in the semantic-pragmatics interface (i.e., deixis, implicature, presupposition). We will discuss how to experimentally investigate and formally model human reasoning. The seminar consists of lectures, student presentations of journal articles as well as book chapters, and exercise sessions.

Grades will be based on:

- presentations
- written assignments
- written examinations

Language of instruction: English, Prerequisites: basic logic course recommended

Proofs of academic achievement: -

FACULTY OF PHYSICS AND ASTRONOMY

<http://www.physik.rub.de>

Contact:

Anke Pappert

Tel: 0234/32-23445

Email: dekanat@physik.rub.de

The Faculty of Physics and Astronomy offers a broad range of courses in English. Detailed information can be found at www.physik.rub.de/studium/vorlesungsverzeichnis. Please have a look at the notice board at NB 02 Nord for changes and dates.

Courses start at the next possible date after lectures start in winter semester (10/10/2011).

Details concerning exercises will be fixed during the corresponding lectures.

Solid-State Physics

Course Nr	Course Title	Day, Time	Room	Language	Lecturer
160 309	Atomistic Simulation Methods	n.s.	n.s.	English	Drautz
160 310	Exercise Atomistic Simulation Methods	n.s.	n.s.	English	Drautz
160 311	Advanced Atomistic Simulation Methods	n.s.	n.s.	English	Drautz
160 312	Übungen zu Advanced Atomistic Simulation Methods	n.s.	n.s.	English	Drautz
160 326	Methods of quantum field theory in solid state and high energy physics	Fr 16.00-18.00	NB 6/73	English	Eremin, Polyakov

Nuclei and particle physics

Course Nr	Course Title	Day, Time	Room	Language	Lecturer
160 407	Nukleosynthese in der Nuklearen Astrophysik	Fri. 12-14.00	NB 2/170	German or English	Stockmanns
160 408	Seminar zu Nukleosynthese in der Nuklearen Astrophysik	Fri. 10-12.00	NB 2/170	German or English	Stockmanns
160 424	Seminar: Methods of quantum field theory in solid state and high energy physics	n.s.	n.s.	English	Polyakov, Eremin
160 425	Seminar zu Symmetrieverletzungen in hadronischen Wechselwirkungen	Fri. 10-12.00	NB 2/170	German or English	Ritman

Plasma and atomic physics

Course Nr.	Course Title	Day, Time	Room	Language	Lecturer
160 507	Thin Films and Nanomaterials	Di. 14-16.00 Fr. 10-11.00	NB 5/99 NB 02/99	English	de los Arcos, Benedikt
160 508	Exercise Thin Films and Nanomaterials	Fri. 11-12.00	NB 5/158	English	de los Arcos, Benedikt
160 512	Spektroskopie der Atome und Ionen	Fri. 14.15- 16.00	NB 02/99	German or English	Träbert
160 513	Quantentheorie des Lichts I	n.s.	n.s.	German or English	Rosmej
160 515	Atomare Besetzungsmodelle und ihre Anwendung in der Spektroskopie von Labor- und astrophysikalischen Plasmen	n.s.	n.s.	German or English	Marchuk
160 516	Exercise Atomare Besetzungsmodelle und ihre Anwendung in der Spektroskopie von Labor- und astrophysikalischen Plasmen	n.s.	n.s.	German or English	Marchuk

Astronomy and Astrophysics

Course Nr.	Course Title	Day, Time	Room	Language	Lecturer
160 407	Nukleosynthese in der Nuklearen Astrophysik	Fr, 12.15- 13.45	NB 2/170	English	Stockmanns
160 408	Seminar zu Nukleosynthese in der Nuklearen Astrophysik	Fr, 10.15- 11.45	NB 2/170	German or English	Stockmanns
160 515	Atomare Besetzungsmodelle und ihre Anwendung in der Spektroskopie von Labor- und astrophysikalischen Plasmen	n.s.	n.s.	German or English	Marchuk
160 516	Exercise Atomare Besetzungsmodelle und ihre Anwendung in der Spektroskopie von Labor- und astrophysikalischen Plasmen	n.s.	n.s.	German or English	Marchuk

FACULTY OF PSYCHOLOGY

PERCEPTION AND COGNITION: A COMPUTATIONAL APPROACH 2

Language: English

Department: MRG “Structure of Memory”

Contact: Prof. Sen Cheng, +497234732 27136, sen.cheng@rub.de

Degree programme: Bachelor

Module: Informationsverarbeitung

This module is taught entirely in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Prof. Sen Cheng

Requirements: The first part of this seminar or equivalent

Room	Day, Time	Begin
GA 04/187 and GAFO 04/615	Fri 12.00-14.00	19.10.2012

Course description:

Perception and cognition are central topics in psychology that can be studied using many different methods. This two-seminar series takes a computational approach to studying and understanding perception and cognition. The advantage of this approach is that highly complex results can be captured and explained using simple mathematical equations. The use of mathematical models and methods in psychology has a long history dating back to the 1800s.

The first part of this series focused on perception and decision making, while the second part will focus on learning and memory. This seminar will integrate lectures, student presentations and computer labs. All programming will be based on the scientific programming package Matlab. A basic introduction will be given at the beginning of the seminar, so previous programming experience is not required. Classes will be taught in English. The evaluation will be based on homework assignments and a course project.

Proofs of academic achievement: homework assignments and a course project

INTRODUCTION TO PERCEPTION

Language: English

Department: MRG “Structure of Memory”

Contact: Prof. Sen Cheng, +497234732 27136, sen.cheng@rub.de

Degree programme: Master

Module: Wahrnehmung

This module is taught entirely in English

Course type: Lecture

Credit Points: 3

Teacher/Lecturer: Prof. Sen Cheng

Requirements: -

Room	Day, Time	Begin
GA 04/187	Mon 10.00-12.00	15.10.2012

Course description:

Perception of sensory inputs can be studied along three different dimensions: modality, description level and methodology. This lecture will discuss several different examples along each dimension and highlight common principles, when possible. Modalities include, for instance, vision, audition, olfaction and proprioception. The description level will range from receptor physiology to Gestalt psychology. The methodology will include psychophysics, electrophysiology and computational modeling.

Proofs of academic achievement: -

THE NEURAL BASIS OF VISION

Language: English

Department: MRG "Structure of Memory"

Contact: Prof. Sen Cheng, +497234732 27136, sen.cheng@rub.de

Degree programme: Master

Module: Wahrnehmung

This module is taught entirely in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Prof. Sen Cheng

Requirements: -

Room	Day, Time	Begin
GA 04/187	Fri 10.00-12.00	19.10.2012

Course description:

Perception of sensory inputs can be studied along three different dimensions: modality, description level and methodology. This lecture will discuss several different examples along each dimension and highlight common principles, when possible. Modalities include, for instance, vision, audition, olfaction and proprioception. The description level will range from receptor physiology to Gestalt psychology. The methodology will include psychophysics, electrophysiology and computational modeling.

Proofs of academic achievement: -

INTRACELLULAR ELECTROPHYSIOLOGICAL RECORDING TECHNIQUE

Language: English

Department: MRG "Structure of Memory"

Contact: Prof. Motoharu Yoshida, +49/234/32-27138, motoharu.yoshida@ruhr-uni-bochum.de

Degree programme: Bachelor

Module: -

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Prof. Dr. Yoshida

Requirements: -

Room	Day, Time	Begin
GA 04/187	Thursday, 10-12	16.10.2012

Course description:

Brain functions are based on the activity of single neurons. Intracellular electrophysiological recording techniques enable us to observe the activity and to study the properties of single neurons. In this seminar, students will learn in-vitro patch-clamp recording, which is a popular and powerful intracellular recording technique. This seminar consists of both theoretical background studies and practical hands-on lab experiences. In more details, students will learn 1) the theory of intracellular recording, 2) brain slice preparation using animal brains, 3) patchclamp recording, 4) visualization of recorded neurons, and 5) data analysis. Intracellular electrophysiological recording technique is not restricted to the study of single-cell properties. When combined with extra-cellular stimulation electrode, one can easily study properties of synaptic connections such as long-term synaptic potentiation and depression. Therefore, this method is also often used to study properties of neural networks which are believed to be crucial for functions of the brain.

Proofs of academic achievement: Report

LEFT BRAIN - RIGHT BRAIN

Language: English

Department: Biopsychologie

Contact: Prof. Dr. Drs. h.c. Onur Güntürkün, +48/234/32 - 26213, Onur.Guentuerkuen@rub.de

Degree programme: Master

Module: Asymmetrie

This module is taught entirely in English

Course type: Lecture

Credit Points: 3

Teacher/Lecturer: Prof. Dr. Drs. h.c. Onur Güntürkün

Requirements: -

Room	Day, Time	Begin
GAFO 03/252	Thu 12.00-14.00	11.10.2012

Course description:

Most of our brain's processes are executed by different mechanisms in the left and the right hemisphere. Language, spatial orientation, motor control, emotional processing, face perception, and even the ability to comprehend the rhythm of a drum are guided by neural circuits that are differently tuned within the two hemispheres. These asymmetries of mental processing mean that damages of the human brain cannot be understood without a thorough understanding of asymmetries. The lecture aims at explaining the current knowledge about the structure and the mechanisms of cerebral asymmetries by making use of highly interactive teaching methods.

Proofs of academic achievement: written examination

RESEARCH COLLOQUIUM

Language: English

Department: Biopsychologie

Contact: Prof. Dr. Drs. h.c. Onur Güntürkün, +49/234/32 - 26213, Onur.Guentuerkuen@rub.de

Degree programme: Master

Module: -

Course type: colloquium

Credit Points: -

Teacher/Lecturer: Prof. Dr. Drs. h.c. Onur Güntürkün

Requirements: Bachelors Degree

Room	Day, Time	Begin
GAFO 05/425	Mon 13.00-15.00	15.10.2012

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.ruhr-uni-bochum.de/>

Proofs of academic achievement: -

LAB COURSE: NEURAL SUBSTRATES OF MEMORY FUNCTION

Language: English

Department: MRG "Structure of Memory"

Contact: Prof. Dr. Sauvage, +49/234/32-27135, magdalena.sauvage@rub.de

Degree programme: Master

Module: -

This module is taught entirely in English.

Course type: Seminar

Credit Points: -

Teacher/Lecturer: Prof. Dr. Sauvage

Requirements: -

Room	Day, Time	Begin
GA 04/187	By arrangement	

Course description:

The unit focuses on the identification of the brain areas that support memory function in healthy subjects, aging and model of amnesia. Several aspects of memory are studied: familiarity versus recollection, memory for single items versus pairs, memory for space versus time. We use a multidisciplinary approach of memory function that includes behavioral, lesion and neuroanatomical imaging techniques in rats and mice. The focus of the project is the study of the functional segregation of the medial temporal lobe, a brain structure damaged in aging and amnesic patients, which leads to severe memory impairments. The project involves the combination of behavioral and molecular imaging techniques. No previous experience is required, highly motivated candidates will be considered.

Proofs of academic achievement: -

MEMORY FUNCTION: NOVEL BEHAVIOURAL, MOLECULAR ANDIMAGING TECHNIQUES

Language: English

Department: MRG "Structure of Memory"

Contact: Prof. Dr. Sauvage, +49/234/32-27135, magdalena.sauvage@rub.de

Degree programme: Master

Module: -

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Prof. Dr. Sauvage

Requirements: -

Room	Day, Time	Begin
MRG room 04/187	Wednesday 4 -6p.m.,	08.10.2012

Course description:

This seminar is methodology-oriented. It focuses on the latest generation of behavioural, molecular and imaging techniques developed: inducible and region-specific brain mutagenesis; molecular brain imaging based on the detection of immediate-early genes (by

immunocytochemistry and in-situ hybridization); diffusion tensor imaging; optogenetics (lightactivated channels) and behavioural translational paradigms (standard human tasks adapted to animals). These methods, which go beyond the spatial and temporal resolution of standard techniques, led to important new findings in memory research, for example through the study of the functional segregation of the medial temporal lobe (MTL), a structure altered in aging and amnesic patients, but can also be applied to all fields of research. Background on each technique is provided during the class, advantages and limits of these new techniques are contrasted with those of standard techniques. An example of how each technique is given through the presentation of one related scientific article (journal club) and an 'hands-on' introduction is given for some of the techniques.

Learning objectives/Fachkompetenzen:

The students learn about the newest techniques available to study memory function, as well as the advantages and short-coming of these techniques.

Methodological competences/Method. Kompetenzen:

This seminar is interdisciplinary, eg involves behavioral, molecular and imaging techniques.

Soft skills/Sozialkompetenzen:

The students will learn to present scientific publications in front of an audience and will be given the tools for a more critical evaluation of this material.

" Individual competences/Selbstkompetenzen:

The theoretical background of different techniques will be given to students to allow for a more critical reading of the material available and a more personal interpretation of published data.

Teaching Methods/Lehrformen:

Each session (2 hours) involves a '1 hour' Lecture, given by the lecturer who introduces the theoretical background of a given technique and a '1 hour' presentation by a student that will discuss, together with the audience, a paper that illustrates the technique presented by the lecturer, and give his/her own interpretation of the data.

Proofs of academic achievement: short 5 min quizzes, oral presentations, final exam (quiz)

THEORIE UND PRAXIS INTERKULTURELLER TRAININGS / COACHINGS (2. TEIL)

Language: English

Department: AE Methodenlehre, Diagnostik und Evaluation

Contact: Vinita Samarasinghe, +49/234/32-22479, Vinita.Samarasinghe@rub.de

Degree programme: Master

Module: Theorie und Praxis interkultureller Trainings / Coachings

This module is taught entirely in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Vinita Samarasinghe

Requirements: Teilnahme an Teil 1 des Seminars

Room	Day, Time	Begin
GAFO 04/621	8-12 Uhr	16.10.2012

Course description:

Fortsetzung der im Sommersemester begonnenen Arbeiten, insbesondere die praktische Durchführung der Coachings bzw. Trainings mit ausländischen Studierenden.

Die genauen Termine (immer Dienstag 12-16 Uhr) werden noch im Blackboard bekannt gegeben.

Proofs of academic achievement: -

MULTIVARIATE VERFAHREN

Language: English

Department: AE Methodenlehre, Diagnostik und Evaluation

Contact: Vinita Samarasinghe, +49/234/32-22479, Vinita.Samarasinghe@rub.de

Degree programme: Theorie und Praxis interkultureller Trainings / Coachings

Module: Theorie und Praxis interkultureller Trainings / Coachings

This module is taught entirely in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Vinita Samarasinghe

Requirements: Teilnahme an Teil 1 des Seminars

Room	Day, Time	Begin
GAFO 04/615	Wed 10.00-12.00	17.10.2012

Course description:

This is an independent study course. There will be no seminars in association with this course. This course will cover multivariate statistics with a focus on the design and analysis of complex systems with multiple predictors. The subject will be approached from a practical viewpoint that will help the participants understand how to choose a model, form and test a hypothesis, and recognize structures and patterns within the data. As such, the course will not dwell on the mathematics behind the statistical methods and will rely on real world data. The main tool used in this course will be SPSS. LISREL will be used for confirmatory factor analysis

Topics:

1. Multiple Regression
2. MANOVA
3. Discriminant Analysis
4. Cluster Analysis
5. Exploratory and Confirmatory Factor Analysis
6. Canonical Correlation

The primary language of instruction for this course is English.

Proofs of academic achievement: -

NEUROENHANCEMENT UND MORAL

Language: English

Department: AE Neuropsychologie

Contact: Dr. Christian Bellebaum , +49/32/32 23119, christian.bellebaum@rub.de

Degree programme: Master

Module: -

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Christian Bellebaum

Requirements: -

Room	Day, Time	Begin
GAFO 05/609	Wed 16.00-18.00	17.10.2012

Course description:

Seit einigen Jahren ist eine Debatte um das so genannte „Neuroenhancement“, die Steigerung der Leistungsfähigkeit durch die Einnahme pharmakologischer Substanzen bei Gesunden, entbrannt. Im Rahmen des interdisziplinär angelegten Seminars soll das Thema Neuroenhancement aus verschiedenen Blickwinkeln betrachtet werden. Das Themenspektrum reicht von den verfügbaren Substanzen und ihren Wirkungsmechanismen über die objektiv feststellbaren Einflüsse auf das Leistungsvermögen hin zu ethischen Aspekten von Neuroenhancement. Das Seminar richtet sich an Studierende im 1. oder 3. Fachsemester des Master-Studiengangs. Es findet im 14-tägigen Rhythmus statt. Den Semesterabschluss bildet eine zweitägige interdisziplinäre Fachtagung an der Ruhr-Universität vom 01. bis 02. Februar 2013, auf der Experten aus unterschiedlichen Disziplinen ihre Sicht auf Neuroenhancement darstellen werden.

Proofs of academic achievement: -

NEUROPHYSIOLOGY OF MEMORY

Language: English

Department: Psychology

Contact: Jun. Prof. Dr. Motoharu Yoshida, +49 234 32-27138, motoharu.yoshida@rub.de

Degree program: Master

Course type: Seminar

Teacher/Lecturer: Prof. Dr. Motoharu Yoshida

Requirements: None

Room	Day, Time	Begin
GA 04/187 (MRG1 seminar room)	Thursday, 14-16h	

Course description:

How do we remember? Thousands of neurons are working in the brain to support memory function. They are not randomly active but are coordinated properly. This seminar focuses on the cellular mechanisms which support memory function. The seminar will be a combination of lectures and literature presentations by students. Topics of the seminar are: synaptic plasticity, encoding and consolidation stages of memory, roles of oscillations, modulation of ion channels during memory tasks, roles of neuro-modulators, and neural network dynamics.

Proof of academic achievement: Presentations

INTRACELLULAR ELECTROPHYSIOLOGICAL RECORDING TECHNIQUE

Language: English

Department: Psychology

Degree program: Bachelor

Course type: Project Seminar

Teacher/Lecturer: Prof. Dr. Motoharu Yoshida

Requirements: none

Room	Day, Time	Begin
GA 04/187 (MRG1 seminar room)	Thursday, 10-12h	

Course description:

Brain functions are based on the activity of single neurons. Intracellular electrophysiological recording techniques enable us to observe the activity and to study the properties of single neurons. In this seminar, students will learn in-vitro patch-clamp recording, which is a popular and powerful intracellular recording technique. This seminar consists of both theoretical background studies and practical hands-on lab experiences. In more details, students will learn 1) the theory of intracellular recording, 2) brain slice preparation using animal brains, 3) patch-clamp recording, 4) visualization of recorded neurons, and 5) data analysis. Intracellular electrophysiological recording technique is not restricted to the study of single-cell properties. When combined with extra-cellular stimulation electrode, one can easily study properties of synaptic connections such as long-term synaptic potentiation and depression. Therefore, this method is also often used to study properties of neural networks which are believed to be crucial for functions of the brain.

Proof of academic achievement: Report

FACULTY OF SOCIAL SCIENCE

Dear student, dear researcher, dear guest,

This is the Common Course Catalogue of the Faculty of Social Science in Bochum and the Faculty of Social Sciences in Duisburg.

For providing International Students a broad variety of courses offered in English the Faculty of Social Science cooperates with the Faculty of Social Sciences of the University of Duisburg-Essen. Both Universities are located within 20 minutes and exceptionally well connected by local public transport system. International guest students who wish to spend part of their degree in Bochum or Duisburg can choose courses from both universities at Bachelor- or Masterlevel in the field of social science. For successful studies in English speaking courses, a high standard of English language skills is required. In individual cases this must be verified by the Departmental Coordinator of your host university (see contact details below).

The Faculty of Social Science at the Ruhr-University Bochum pursues a modern interdisciplinary approach of Social Science. The central characteristic of the Faculty is the linking between the five on par disciplines Political Science, Sociology, Social Psychology and Social Anthropology, Social Policy and Social Economy as well as Social Science Methodology and Statistics.

The Faculty of Social Sciences in Duisburg/Essen offers a wide range of courses in the field of political science and sociology. In particular students with a high interest in International Relations, Governance, Development Policy, Migration and East Asian Studies can advance their professional competences within these fields.

TOPICS IN CONTEMPORARY EUROPEAN POLITICS: ENVIRONMENTAL POLITICS AND THE EUROPEAN UNION

Language: English

Department: Political Science

Degree programme: Bachelor

Contact: Patrycja Rozbicka, 32 - 29984, patrycja.rozbicka@rub.de

Module: Comparative Political Science

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 5 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Dr. Patrycja Rozbicka

Requirements: Registration for the course until the 17th of October via VSPL or via Email at the lecturer.

Room	Day, Time	Begin
Campus Bochum, GCFW 04/703	Wed, 10.15 - 11.45	10/10/2012

Course description:

The environmental policy of the European Union (EU) has made impressive progress during the last four decades (Knill, Liefferink, 2007). Since the early 1970s, there has been a growing expansion of regulatory activities and policy competences at the European level. Environmental policy, which started off as a by-product of economic integration, has developed into an impressive area of the EU policy-making. The purpose of the course is to get acquainted with a comprehensive overview of central features and developments of EU environmental policy. In particular, the course will focus on following aspects: the development of environmental activities at the EU level, central areas and instruments of the EU environmental policy, effectiveness and problem-solving capacity of the EU in the environmental field, and factors influencing the formulation and implementation of the EU environmental policy. Throughout the course, the students will acquire knowledge and expertise which will allow them to examine concrete cases of the realization of the EU environmental policy.

Proofs of academic achievement: To acquire a „Leistungsnachweis“ (5 CP, graded) (module exam):

Assignment I Class participation and attendance are an important part of the grade. Throughout the seminars we will work as a group through a set of required readings on a scheduled topic. Students are expected to carefully read and critique the assigned materials. To facilitate discussions during the seminar, the students will be required to prepare few short written reading responses (3-4 papers, 2-3 pages long).

Assignment II Secondly, students are expected to write a final paper on a topic within the study of EU environmental politics (a selection from predefined list). The paper will be max.15 pages long and focus on questions like: Why and how a particular policy was established? Where there any abnormalities in its development? Which actors were involved in this particular policy proposal and what they brought to the process? A brief comparison to other EU environmental policies discussed in the classes (differences and similarities)

Assignment III Thirdly, students are expected to prepare a presentation on the topic of their final paper. The presentations will be scheduled a week prior to the papers deadline and are meant as an exercise and a chance to receive comments before final submission.

To acquire a „Studiennachweis“ (3 CP, ungraded):

Assignment I Class participation and attendance. Similar as in a 'Leistungsnachweis', throughout the seminars we will work as a group through a set of required readings on a scheduled topic. Students are expected to carefully read and critique the assigned materials. To facilitate discussions during the seminar, the students will be required to prepare few short written reading responses (3-4 papers, 2-3 pages long).

Assignment II Students are expected to prepare a presentation on the topic of one of the articles read through-out the course.

Literature:

A detailed list of literature will be handed out at the first lecture.

For Introduction:

Jordan, Andrew (2005) Environmental Policy in the European Union. Actors, Institutions & Processes. London, Sterling, VA: Earthscan.

Knill, Christofer, Liefferink, Duncan (2007) The Environmental politics in the European Union. Manchester, UK : Manchester Univ Press ; New York, N.Y. : Palgrave.

This course is credited for „Optionalbereich“.

MIGRATION AND DEVELOPMENT - TRIPLE WIN OR DOUBLE LOSS?

Language: English

Department: Sociology

Degree programme: Bachelor

Contact: Ludger Pries, 32-25429, Ludger.Pries@rub.de

Module: Internationalization and Socialization in Comparison

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 5 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Prof. Dr. Ludger Pries

Requirements: Interest in migration and development topics, active participation and engagement

Room	Day, Time	Begin
Campus Bochum, GBCF 04/611	Wed 10.15 - 11.45	10/10/2012

Course description:

In recent years the two topics of migration and development were combined in concepts of 'circular migration' and 'triple-win'. The basic idea is that circular or timely limited migration processes that are explicitly agreed between poorer countries and richer countries could have positive effects for all parts: for the countries of origin (by receiving migrants' remittances and later on qualified return migrants), for the countries of arrival (by getting the profiles of workers they need) and for the migrants themselves (by opening opportunities of jobs, earnings and training). International and supranational

organisations (like the UN and the EU), international development agencies (like GIZ) and several national governments (like in Sweden, Germany, France) pushed the ideas of circular migration and triple-win. Some arguments remember of the old 'guestworker'-programs developed during the 1960s and 1970s. What are the 'lessons learned' from these older guest-worker experiences that were also arguing in favour of a win-win-situation for countries and migrants? What would be the conditions for a sustainable migration-development-nexus? The program of the seminar will be threefold:

1. A critical balance of 'guestworker'-programs will be elaborated in a comparative perspective,
2. An epistemological overview of the methods of international comparison will be given and
3. A systematic comparison of selected recent national circular-migration-programs (e.g. Germany,

France, Netherlands, Sweden) will be elaborated. The course will work mainly in smaller groups.

Proofs of academic achievement: For evidence of participation (Studiennachweis, 3 CP, ungraded) participants have to elaborate six text resumes and participate actively in all session (two failures maximum). For evidence of module-achievement (Modulleistungsnachweis, 5 CP, graded) participants additionally have to prepare and hold at least one presentation in the seminar with thesis paper and write a paper of about 15-20 pages (in German or English). These papers (homework) could be group works as well.

Literature:

Recommendable as introduction to migration and development/circular migration:

Castles, Stephen/ Wise, Raúl Delgado (Editors), 2007: Migration and Development: Perspectives from the South. Geneva: ILO

Constant, Amelie/Zimmermann, Klaus F., 2007: Circular Migration: Counts of Exits and Years Away from the Host Country. IZA DP No. 2999. Bonn: IZA

Kathmann, Till 2012: Die Konzepte zur zirkulären Migration: Alte Gastarbeiterpolitik oder neue Arbeitsmigration? In: Hunger, Uwe; Pioch, Roswitha et al.: Jahrbuch Migration 2011/12. Münster u. a: Lit-Verlag

Recommendable as introduction to international comparison:

Goldthorpe, John H., 1997: Current Issues in Comparative Macrosociology: A Debate on Methodological Issues. In: Comparative Social Research, Vol. 16, S. 1-26

Smelser, Nils, 1976: Comparative Methods in the Social Sciences. Englewood Cliffs: Prentice-Hall

Berting, Jan/Geyer, F./Jurkovic, R. (eds.), 1979: Problems in International Comparative Research in the Social Sciences. Oxford: Pergamon Press

Ragin, Charles C., 1987: The Comparative Method. Berkely: University of California Press

This course is credited for „Optionalbereich“.

INTRODUCTION TO TRANSNATIONAL RESEARCH

Language: English

Department: Sociology

Degree programme: Bachelor

Contact: Kyoko Shinozaki, 32-22580, kyoko.shinozaki@rub.de

Module: Internationalization and Socialization in Comparison

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 5 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Dr. Kyoko Shinozaki

Requirements: Interest in international migration-related issues and active participation, Basic knowledge about sociological theories.

Room	Day, Time	Begin
Campus Bochum, GCFW 04/703	Th. 10.15-11.45	11/10/2012

Course description:

Our everyday life is increasingly linked to dense global networks. Social, economic, political and cultural connectivity crossing nation state borders fundamentally affects our lives. This seminar explores diverse topics related to this burgeoning approach to migration, transnationalism, through theoretical debates and case studies. We will learn about different types of transnational migration, various regional perspectives on transnational migration, building, maintaining and reconfiguring of organizations and migrant communities across borders, experiences in the workplace, and how power dynamics is re-created through migration processes. Theoretically, we will probe into the viability of the transnational approach throughout the semester.

The seminar will mainly, but not exclusively, cover the following topics:

1. Theoretical discussions around transnational studies and their development over time

2. Comparison of different regional perspectives on transnational studies (Europe, North America, Asia and Africa)
3. Critique of transnational perspectives
4. The role of the state, the family, companies and migrant organizations in transnational processes
5. Methodologies and transnational studies

Proofs of academic achievement: For all: class attendance, active participation, moderation, and group project. Those who wish to do a module exam („Leistungsnachweis“, 5 CP, graded) are additionally required to submit a term paper on one of the seminar topics.

Literature:

Amelina, Anna, Nergiz, Devrimsel D. Faist, Thomas & Glick Schiller, Nina eds., 2012, Beyond Methodological Nationalism: Research Methodologies for Cross-Border Studies, London: Routledge.

Faist, Thomas, Fauser, Margit & Reisenauer, Eveline, 2012 (forthcoming), The Transnational in Migration. New York & Oxford: Polity Press.

Khagramm, Sanjeev & Levitt, Peggy eds., 2008, The Transnational Studies. Reader, London: Routledge.

Levitt, Peggy, DeWind, Josh & Vertovec, Steven eds., 2003, International Migration Review. Special Issue on Transnational Migration: International Perspectives, 37(Fall).

Portes, Alejandro, Guarnizo, Luis E. & Landolt, Patricia, 1999, „The study of transnationalism: pitfalls and promise of an emergent research field,“ Ethnic and Racial Studies, 22(2): 217-237.

Pries, Ludger, 2010, Transnationalisierung. Theorie und Empirie grenzüberschreitender Vergesellschaftung, Wiesbaden: VS-Verlag.

Ethnic and Racial Studies. Special Issue: Methodologies on the Move: the Transnational Turn in Empirical Migration Research, 2012 (forthcoming).

SKILLED MOBILITIES

Language: English

Department: Sociology

Degree programme: Bachelor

Contact: Kyoko Shinozaki, 32-22580, kyoko.shinozaki@rub.de

Module: Cultural Change and Migration

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 5 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Dr. Kyoko Shinozaki

Requirements: Interest in international migration-related issues and active participation, Basic knowledge about sociological theories.

Room	Day, Time	Begin
Campus Bochum, GBCF 05/606	Th. 14.15 - 15.45	11/10/2012

Course description:

Skilled migrants had long been an under-researched topic of inquiry within migration studies, which tends to focus on the multifarious international diasporas of the poor and the powerless. However, the international mobility of skilled migrants is increasing in scale and complexity. 'Mobile talent' transfers knowledge both directly and indirectly across the globe by spatially moving across nationstate borders as well as through diaspora and professional networks. This can boost global innovation performance, with benefits accruing to both sending and receiving countries. „Competition for talent“ is influencing migration policy in both industrialized and emerging economies. Clearly, mobility is leading to an increasing level of labor-market internationalization, which has led many observers to conceptualize this stream of migrants' spatial movements and knowledge diffusion in terms of „mobility“, instead of the conventional language of „im/migration“ within migration studies. This seminar explores diverse topics related to (highly) skilled mobility/migration through theoretical debates and case studies, situating these in migration scholarship. The seminar will mainly, but not exclusively, cover the following topics:

1. Theoretical discussions around mobility;
2. State policies concerning (highly) skilled workers in a selected group of countries (e.g. Germany, UK, Canada, Japan and China)
3. Academics and international students as (future highly) skilled workers
4. „Expatriates“
5. Missing link between the work and the family in skilled migration research
6. Relevance of gender to understanding the 'highly skilled'
7. Skilled migration and development

Proofs of academic achievement: For all: class attendance, active participation, moderation, and group project. Those who wish to do a module exam („Leistungsnachweis“, 5 CP, graded) are additionally required to submit a term paper on one of the seminar topics.

Literature:

Ackers, Louise, 2005, Moving people and knowledge: Scientific mobility in the European Union. *International Migration*, 43(5), 99-131.

Bade, Klaus, Lorentz, Bernhard & Pries, Ludger eds., *Migration and Integration: Reflections on Our Common Future*, Leipzig: Europäische Verlagsanstalt.

Journal of Ethnic and Migration Studies, 2004, 30(2).

Kreutzer, Florian & Roth, Silke Hg., 2006, *Transnationale Karrieren: Biografien, Lebensführung und Mobilität*. Wiesbaden: VS Verlag für Sozialwissenschaften.

OECD, 2008, *The Global Competition for Talent: Mobility of the Highly Skilled*, Paris: OECD.

Saxenian, A., 2005, „From brain drain to brain circulation: transnational communities and regional upgrading in India and China“, *Studies in Comparative International Development*, 40(2), 35-61.

Sachverständigenrat deutscher Stiftung für Integration und Migration, 2011, *Migrationsland 11*, Berlin: SVR.

Urry, John, 2007. *Mobilities*. Cambridge: Polity Press.

Yeoh, Brenda S. A. & Huang, Shirlena, 2011, *Journal of Ethnic and Migration Studies*. Special Issue on In and Out of Asia: The Cultural Politics of Talent Migration, 37(5).

THE POLITICAL SYSTEM OF THE EUROPEAN UNION

Language: English

Department: Political Science

Degree programme: Bachelor

Contact: Rainer Eising, 32-25172, Rainer.Eising@rub.de

Module: European Union

This module is taught only partly in English.

Course type: Lecture

Credit Points: 3 or 5 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Prof. Dr. Rainer Eising

Requirements: Basic knowledge about political systems and comparative political science are recommended.

Room	Day, Time	Begin
Campus Bochum, HGC 30	Mo. 10.15 - 11.45	08/10/2012

Course description:

The lecture gives an introduction to the study of the EU political system. The emphasis is on approaches that are rooted in political science. We will analyze the structure, functions, and activities of the main EU institutions (European Commission, European Parliament, Court of Justice, EU Council and European Council) as well as major policy-making areas of the European Union (single market, economic and monetary union, etc.). Furthermore, we will study how the European Union impacts on its member states and how EU policies are being implemented. Students will also be introduced to important approaches, theories, and models that have been used to study European politics.

Proofs of academic achievement: Leistungsnachweise (module exam) and Studiennachweise can be obtained when passing the corresponding written exams.

Literature:

Michelle Cini and Nieves Pérez-Solórzano Borragán (Eds.): European Union Politics, Oxford: Oxford University Press 2010, 3rd edition (or newer edition).

Simon Hix and Bjorn Hoyland: The Political System of the European Union, Basingstoke: Palgrave MacMillan 2011, 3rd edition.

WHAT IT MEANS TO BE HUMAN IN 21ST CENTURY LIFE SCIENCES

Language: English

Department: Social Economic

Degree programme: Master

Contact: Estrid Sørensen ,32-27947, estrid.sorensen@rub.de

Module: Health and Society

This module is taught only partly in English.

Course type: Compact Seminar

Credit Points: 3 or 6 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Tuschling, Wübben, Brandt, Sörensen

Requirements: n.s.

Room	Day, Time	Begin
Campus Bochum, FNO 02/11	Compact Course (see course description)	10/10/2012 at 10:15 AM Preliminary Meeting

Course description:

At the beginning of the 21st century both the individual and the social are strongly bound to knowledge from the life-sciences. Our understanding of the individual and the social conditions of the human is seen to be inextricably interwoven with developments in corresponding theories and technologies. The very notion of a “human nature” is challenged by new approaches to bioengineering organisms which have the potential of reshaping the individual human body. “Nature” no longer has the connotation of a deterministic category, but turns into something more flexible against which the domain of “culture” may even be seen to remain as the more permanent part. Ideas of cultural identity and human diversity are affected by research in genomics. The post-human genome projects reconfigure longstanding questions of cultural/natural diversity across human populations. Research on stem cells and cloning techniques is accompanied by high expectations of the medical application, just as it creates new ethical questions about the relation of bodies and societies. Among these are new definitions of “kinship”. The question of 'what it means to be human' has become reshaped by modes of scientific explanations that challenge both philosophical discussion and social understandings of the cultural shaping of human behaviour. The seminar will investigate recent transformations of the concepts of the human along with a longer history of knowledge production in the life and human sciences. We will focus on historical shifts in basic concepts and discourses, as well as on the analysis of knowledge generating practices, such as experimental systems, media technologies and visual representations.

The seminar will take place as 6-hours sessions on four Fridays during the semester plus a one week spring school with invited international scholars in March 2013. All dates will be announced in the preliminary meeting on 10 October 10:15 AM in Room FNO 02/11. All interested students are advised to attend this preliminary meeting.

Proofs of academic achievement: Students may acquire evidence of participation (Studiennachweis, 3 CP, ungraded) or evidence of module achievement (Leistungsnachweis, 6 CP, graded)

RESEARCH IN THE MARGINS OF (SOUTH ASIAN) STATES

Language: English

Department: Sociology

Degree programme: Master

Contact: Eva Gerharz, 32-25411, Eva.Gerharz@rub.de

Module: Area and Development

This module is taught only partly in English.

Course type: Compact Seminar

Credit Points: 3 or 6 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Prof. Dr. Eva Gerharz, Nasir Uddin

Requirements: Capability of reading English literature, discussing and presenting in English

Room	Day, Time	Begin
Campus Bochum, t.b.a.	Compact Course	t.b.a.

Course description:

This course attempts to comprehend the state by analyzing the dynamics of how people make sense of it in their everyday-lives. It offers alternative ways of looking at the state with critical consideration of theoretical texts and ethnographic analyses of state institutions, practices, and processes that outline an anthropological framework for rethinking the study of "the state". The course focuses on the institutions, spaces, ideas, practices, presentations and representations that constitute the "state" and on local-societal dynamics that people encounter and entertain amidst their everyday experiences. It also sheds light on cultural and transnational approaches to the study of the state as well as deterritorialized state-making projects. The course is designed to develop both the theoretical and methodological tools necessary for grasping the significance of the state by paying attention to systems of meaning and belief, personhood, agency, everyday practice, the hidden and overt mechanics of power, persistent structures and emergent forms. Literature on case studies from South Asia will enable students to make sense of the state as a cultural artifact, as a practice of power, and as multilayered forms of governing agency.

Proofs of academic achievement: Module exam (Leistungsnachweis, 6 CP, graded): Active participation and oral presentation, final paper. Studiennachweis (3 CP; ungraded) on demand.

Literature:

Brown, Wendy. 1995. *States of Injury: Power and Freedom in Late Modernity*. Princeton, NJ: Princeton University of Press.

Dyson, K. 1980. *The State Tradition in Western Europe*. Oxford: Oxford University Press.

Ferguson, James. 1994. *The Anti-Politics Machine: Development, Decentralization and Bureaucratic Power in Lesotho*. Minneapolis: University of Minnesota Press.

G. Joseph & D. Nugent. 1994. *Everyday forms of State Formation*. Duke: Duke University Press.

Sharma, Aradhana and Gupta, Akhil. 2006. *Anthropology of State: A Reader*. London & New York: Sage Publication.

Scott, James. 1998. *Seeing Like a State: How Certain Schemes to Improve Human Condition Have Failed*. London & New Heaven: Yale University Press.

Veena Das and Deborah Poole (eds.). 2004. *Anthropology in the Margins of the State*. New Delhi: Oxford University Press.

Y. Navaro-Yashin. 2002. *Faces of the State*. Princeton: Princeton University Press.

FAITH-BASED HUMANITARIAN ORGANIZATIONS

Language: English

Department: Sociology

Degree programme: Master

Contact: Zeynep Sezgin, 32-22796, zeynep.sezgin@rub.de

Module: Area and Development

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 6 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Dr. Zeynep Sezgin

Requirements: n.s.

Room	Day, Time	Begin
Campus Bochum, t.b.a.	Compact Seminar, September and October	t.b.a.

Course description:

There are five major research areas concerned with the analysis of faith-based humanitarian organizations. First, some humanitarian studies have focused on different humanitarian actors, including the faith-based organizations, and discussed their roles and comparative advantages in contexts where the majority of beneficiaries are coreligionists. Second, there are some studies on faith-based organizations that have focused on the humanitarian activities of these organizations. Third, a small number of migration studies have focused on the activities of faith-based organizations because Muslim humanitarian organizations headquartered in the West have strong migrant

roots. Fourth, an increasing number of development studies have noted the role of migrants and their organizations in the development of their countries of origin. Fifth, with its long tradition of analysing cross-border organizations, organizational research has provided a framework to study faith-based humanitarian organizations. During this seminar, the students will first examine the strengths and shortcomings of the existing studies on faith-based humanitarian organizations. Second, they will focus on the diversity, aims, activities, and transnational structures of faith-based humanitarian organizations. Third, they will study how different types of faith-based humanitarian organizations function, act and legitimate themselves in the countries in which they are headquartered and the humanitarian crisis zones in which they operate, moving in a complex cross-border environment consisting of donors, traditional humanitarian NGOs, state agencies, and other actors. Last but not least, they will discuss whether or not these organizations can legitimate themselves primarily on religious grounds.

Proofs of academic achievement: Module exam (Leistungsnachweis, 6 CP, graded): Active participation and oral presentation, final paper. Studiennachweis (3 CP; ungraded) on demand.

Literature:

De Cordier, B. (2009) 'Faith-based aid, globalisation and the humanitarian frontline: an analysis of Western-based Muslim aid organisations', *Disasters* 33(4): 608-28.

Ferris, E. (2005) 'Faith-based and secular humanitarian organizations', *International Review of the Red Cross* 87: 311-25.

Ozkan, M. (2011) 'Transnational Islam, immigrant NGOs and poverty alleviation: The case of the IGMG', *Journal of International Development* 24(4): 467-84.

Petersen, M.J. (2011) 'Islamizing Aid: Transnational Muslim NGOs After 9.11', *Voluntas* 23(1):126-55.

Rauh, K. (2011) 'NGOS, Foreign Donors, and Organizational Processes: Passive NGO Recipients or

Strategic Actors?', *McGill Sociological Review* 1: 29-45.

Further literature will be announced at the seminar.

GLOBAL ECONOMIC GOVERNANCE IN THEORY AND PRACTICE

Language: English

Department: Political Science

Degree programme: Master

Contact: Aukje van Loon, 32-22956, aukje.vanloon@rub.de

Module: International Institutions and Processes

This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 6 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Aukje van Loon

Requirements: Successful completion of a lecture in "International Relations" or an equivalent. Synopses (1 site per text) to the below-mentioned literature until the third lecture.

Room	Day, Time	Begin
Campus Bochum, GBCF 05/608	Tu. 8.30 - 10.00	09/10/2012

Course description:

The post-World War II period has revealed an accumulation of international institutions and fora (for example IMF, WTO, G20) which have been created in order to govern the global economy. This institutional structure however, has increasingly attracted critique regarding its legitimacy and efficiency. Several financial crises in the 1990s (for example in Argentina, Mexico, Asia) and the more recent 2008 global financial and economic crisis suggest the need for an improved political management of the world economy as existing mechanisms seem not to perform adequately. Besides financial markets, world trade is a second focus because liberalisation through the WTO has become more complex and controversial. In this seminar the analysis focuses on the rise of global economic cooperation and on the reform of existing governance structures. New challenges and opportunities are also faced by both institutions and actors (for example EU, US) in the light of newly industrialised and emerging economies (for example BRICS). Theories of international political economy (IPE) and international relations (IR) will be used to examine these questions and developments by students' investigations of selected case studies.

Proofs of academic achievement: Proofs of academic achievement: Synopses (see above) and a presentation with handout for a "Studiennachweis" (ungraded, 3 CP) or Synopses, presentation with handout and a term paper (graded, 6 CP) for a "Leistungsnachweis".

Literature:

Baumann et al. (2001): Neorealist Foreign Policy Theory, in: Rittberger, V. (ed.) German Foreign Policy since Unification: Theories and Case Studies, Manchester: Manchester University Press, pp. 37-67.

Hurrell, A. (2006): Hegemony, liberalism and global order: what space for would-be great powers? In: International Affairs, 82:1, pp. 59-76.

Keohane, R. (1988): International Institutions: Two Approaches, in: International Studies Quarterly, 32:4, pp. 379-396.

Schirm, S. (2009): Ideas and Interests in Global Financial Governance: Comparing German and US Preference Formation, in: Cambridge Review of International Affairs, 22:3, pp. 501-521.

Schirm, S. (2010): Leaders in Need of Followers: Emerging Powers in Global Governance, in: European Journal of International Relations, 16:2, pp. 197-221.

Williamson, O. (2000): The New Institutional Economics: Taking Stock, Looking Ahead, in: Journal of Economic Literature, 38:3, pp. 595-613.

GENDER AND MIGRATION IN EUROPEAN WELFARE STATES

Language: English

Department: Political Science / Sociology

Degree programme: Master

Contact: Ilse Lenz, 32-28413, Ilse.Lenz@rub.de

Module: Europeanization, Democracy and Governance
This module is taught only partly in English.

Course type: Seminar

Credit Points: 3 or 6 depends on the proofs of academic achievement (see below)

Teacher/Lecturer: Prof. Dr. Ilse Lenz, Prof. Birte Siim

Requirements: n.s.

Room	Day, Time	Begin
Campus Bochum, GBCF 04/414	Wed 10.15-11.45,	10/10/2012

Course description:

The Seminar will discuss the following questions:

How do gender, class and migration interact in modern societies?

What is the importance of different welfare regimes? To what extent are Scandinavian Welfare regimes compatible with egalitarian gender regimes, and does this also apply to their migration regimes? What are the characteristics of conservative regimes such as Germany or liberal regimes such as the UK within a gender context? How far have approaches such as citizenship or diversity proved to be useful and to what extent have they become established in the EU? The seminar provides an international and interdisciplinary dialogue.

The Teachers:

Prof. Birte Siim, Aalborg University and Marie Jahoda Visiting Professor at the RUB-WS 2012/3. Prof. Siim is a political scientist. Her research interests are: freedom, equality and Cohesion, recognition of cultural diversity and democratic theory, class, gender and Migration in different welfare regimes. She has conducted several EU research programs and is active in the ECPR (e.g. ECPR Standing Group on Gender and Politics) as Professor Ilse Lenz (Sociology) is.

Proofs of academic achievement: Attendance is a general precondition for a proof of academic achievement.

"Studiennachweis" (ungraded, 3 CP): Presentation.

"Leistungsnachweis" (graded, 6 CP): Presentation and term-paper.

GLOBAL GOVERNANCE AND DEVELOPMENT

Language: English

Department: Political Science

Degree programme: MA International Relations and Development Policy

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Lecture

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Drik Messner

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LK 053	Tue, 9:00-12:15, 14-tgl.	23.10.2012

Course description:

Die Veranstaltung findet voraussichtlich an folgenden Terminen statt:

1. Dienstag, 23.10.2012
2. Dienstag, 27.11.2012
3. Dienstag, 18.12.2012
4. Dienstag, 08.01.2013
5. Dienstag, 22.01.2013
6. Dienstag, 05.02.2013

Zusätzlich findet ein eintägiges Blockseminar in Bonn statt.

Proofs of academic achievement: written exam

ISSUES IN GLOBAL COOPERATION

Language: English

Department: Political Science

Degree programme: MA International Relations and Development Policy

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Dipl.-Pol. Aletta Mondré

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LK 053	Tue, 16-18	16.10.2012

Course description:

The goal of this class to gain an overview over different practices of international cooperation and aimed at students with a special interest in augmenting their knowledge of international relations theory. This class takes up a variety of issues related to the enhancement of global cooperation. We will review theoretical approaches forwarded in the international relations literature and apply those findings to selected empirical issues. Since there are different degrees of institutionalization of cooperative arrangements we will compare and contrast treaty-based organizations with more informal institutions. This course is also part of the series „Perspectives on International Cooperation” and thus open to PhD students enrolled in the international graduate programme in Bochum (UAMR) and the academic assistants of the Center for Global Cooperation Research (KHK). For this reason, the number of participants is limited. Please express your interest in participation via email.

Proofs of academic achievement: oral presentation, seminar paper

DEMOCRACY AND GOVERNANCE

Language: English

Department: Political Science

Degree programme: MA International Relations and Development Policy

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Dr. Julia Leininger

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen BC 303	single dates in Oct+Nov 2012	25.10.2012, 10-12

Course description:

Democracy, governance and regime change are not only crucial phenomena in any political system but also core concepts of political science. In the first part of the seminar, main concepts and types of democratic and non-democratic regimes as well as governance are introduced. This day ends with a debate on the universality of democracy. In the second part, students learn how to apply these concepts, assess political regimes in developing countries and interpret current indices that aim at measuring the status quo and change of political regimes. In the third part of the seminar, students focus on political change and transformation. They learn to assess and analyze endogenous and exogenous factors for democratization and the persistence of democratic regimes. In particular, the relationship between religion and democracy is analysed. Democracy promotion is at the core of the fourth part. The knowledge of strategies and instruments as well as the effectiveness of international democracy promotion allows students to discuss the legitimacy of international efforts to promote democracy. The seminar concludes with the introduction of empirical findings on the performance of democratic regimes.

Learning objectives: Students get to know core concepts of democracy, governance and regime change and learn how to apply them in empirical research. With regard to soft skill students are invited to improve their skills in sound argumentation, presentation and scientific writing.

Proofs of academic achievement: Presence at class, Presentation, Two short term papers and / or long term paper

DEMOCRACY AND GOVERNANCE

Language: English

Department: Political Science

Degree programme: n.s.

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Christof Hartmann

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LK 063	Mo, 10-12	15.10.2012

Course description:

Democracy and Governance are two of the most contested concepts in comparative politics, and of utmost importance for both reforms in developing countries and for directing donor approaches over the last two decades.

The seminar will consist of three main sections. We will start by discussing and exploring the two concepts and their capacity to 'travel' across time and space. We will then try to explain the emergence and dynamics of democratisation and governance reform and end with the actual relevance and effects of both democracy and governance for different outcomes.

In discussing these concepts we will rely both on cross-national comparative evidence and on case-studies from all world regions.

Proofs of academic achievement: Students will be asked to write two essays, one mid-term and one to be delivered at the end of the teaching bloc. Details will be communicated in the first class meeting.

CHINA'S FOREIGN AND SECURITY POLICIES IN THE CONTEXT OF EAST ASIA

Language: English

Department: Political Science

Degree programme: n.s.

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Magnus Dau, M.A.

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LK 063	Mo, 18:00-19:30	15.10.2012

Course description:

n.s.

Proofs of academic achievement: n.s.

INTRODUCTION TO CHINESE POLITICS

Language: English

Department: Political Science

Degree programme: n.s.

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Lecture

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Thomas Heberer

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen SG 158	Thu, 8:30-10:00	18.10.2012

Course description:

The lecture series introduces to China's political system. It addresses basic concepts of comparative politics, highlights of China's political history after 1949, power structures, formal and informal patterns of participation, issues of political and social change, actors and processes of change.

Proofs of academic achievement: written exam

POLICY ANALYSIS

Language: English

Department: Political Science

Degree programme: MA Development and Governance

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Andreas Blätte

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LC 026	Wed, 16-18	17.10.2012

Course description:

n.s.

Proofs of academic achievement: n.s.

PUBLIC ADMINISTRATION

Language: English

Department: Political Science

Degree programme: MA Development and Governance

Contact: Matthias Schuler, 0203 / 379-2197, ifp-international@uni-due.de

Module: n.s.

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Nicolai Dose

Requirements: n.s.

Room	Day, Time	Begin
Universität Duisburg-Essen LF 310	Tue, 10-12	16.10.2012

Course description:

n.s.

Proofs of academic achievement: n.s.

INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY

SOCIAL SCIENCES PERSPECTIVES

Language: English

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: THEORIES OF DEVELOPMENT AND UNDERDEVELOPMENT -
This module is taught entirely in English.

Course type: Seminar, including Group Work and Short Presentations

Credit Points: 6

Teacher/Lecturer: Dr. Meik Nowak

Requirements: n.s.

Room	Day, Time	Begin
Gb 1/144	Block	9.00

Course description:

The students are able to understand the international discourse about development success and failure based on relevant development theories from social science and economics. They have gained insights into those factors which are made responsible for promoting or obstructing socio-economic development. This enables them to analyse the relevance of different determinants of development and to derive theory-based hypotheses about the effects of development programs and projects and other types of public interventions on the realisation of development goals.

- 1 What is Development and Underdevelopment?
- 2 How to define the Developing World
- 3 Theory and Strategy: Explaining Development and Developing Adequate Strategies Part I:
- 4 Theory and Strategy: Explaining Development and Developing Adequate Strategies Part
- 5 Conclusion: Theories about Development and Underdevelopment

Proofs of academic achievement: Paper of 10 pages

ECONOMIC PERSPECTIVES

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Name THEORIES OF DEVELOPMENT AND UNDERDEVELOPMENT -

This module is taught entirely in English.

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. W. Löwenstein

Requirements: Economic Tutorial or proven Economic Knowledge

Room	Day, Time	Begin
Gb 1/144	Friday , 9.00 - 16.00	26.10.2012

Course description:

The students are able to understand the international discourse about development success and failure based on relevant development theories from social science and economics. They have gained insights into those factors which are made responsible for promoting or obstructing socio-economic development. This enables them to analyse the relevance of different determinants of development and to derive theory-based hypotheses about the effects of development programs and projects and other types of public interventions on the realisation of development goals.

- 1 Introduction: Development Economics and Development Policy
- 2 Sources of Economic Development
- 3 Development Strategies of Developing Countries, Trade and Growth
- 4 Development Aid/Assistance
- 5 Achievements of Development Policy.

Proofs of academic achievement: Written Exam of 120 Minutes

METHODS OF EMPIRICAL SOCIAL RESEARCH - STATISTICS

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Methods of Empirical Social Research

This module is taught entirely in English.

Course type: Lecture

Credit Points: 6

Teacher/Lecturer: Prof. Dr. W. Voss/ Stefan Buchholz

Requirements: Admission to the MA Development Management

Room	Day, Time	Begin
GBCF 04/411	Block	18.9.2012

Course description:

By the end of the course, the students are able to handle basic statistical measurements such as percentages, averages and spreads. They are also enabled to describe a given quantitative data set

with appropriate statistical methods and to carry out necessary calculations. Some basics concerning the design and validation of statistical charts and tables are mastered. Furthermore, the students are able to formulate statistical hypotheses about the relationships between variables and check them

- 1 Introduction: Methods and problems of empirical research. Statistical Variables
- 2 Presentation of statistical data: Tables and Charts
- 3 Means (Averages)
- 4 Measures of dispersion (Spreads)
- 5 Regression analysis
- 6 Correlation analysis
- 7 Chi-Squared Test.

Proofs of academic achievement: Written Exam

INSTITUTIONS & DEVELOPMENT

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Institutions & Development

This module is taught entirely in English.

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dr. Anja Zorob

Requirements: Admission into the MA Development Management

Room	Day, Time	Begin
GB 1/144	Block	9.00 - 16.00

Course description:

Students are aware of the major institutional determinants of development and are enabled to conduct a systematic and theory guided analysis of institutional developmental issues with respect to foreign aid provision, SME development, environmental problems, and agricultural contracting, among others.

- 1 Introduction to Institutions and Development: What are Institutions?
- 2 The Toolbox of the Institutional Analyst: How to Approach Institutions?
- 3 Institutions as Independent Variable: In How Far Do Institutions Matter for Development?
- 4 Summary, Critique and Outlook: Which institutions matter more/most for Development?

Proofs of academic achievement: Written Exam

DEVELOPMENT COOPERATION: ACTORS AND ROLES

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Actors in Development Cooperation

This module is taught entirely in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Prof Dr. Uwe Andersen

Requirements: n.s.

Room	Day, Time	Begin
GB 1/144	Block	separate schedule

Course description:

Students have gained an overview over relevant actors in the field of international development cooperation with a special focus on International Governmental Organisations (IGOs) and International Non-Governmental Organisations (INGOs). They know about distinguishing criteria of these actors, their formal structures, their 'modi operandi' as well as their development over time are considered with the help of real world examples.

Proofs of academic achievement: Oral Exam

PUBLIC SECTOR MANAGEMENT

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Actors in Development Cooperation

This module is taught entirely in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Meik Nowak

Requirements: Admission into the MA Development Management

Room	Day, Time	Begin
GB 1/144	Block	9.00 - 16.00

Course description:

The major aspects of public administration and the challenges the public sectors of developing countries are faced with are introduced to the students. They are enabled to take a comprehensive and interdisciplinary perspective on the complex facets of administration in developing countries.

The course deals with the basics of public sector management - bureaucracy, development administration and New Public management. The course will be based mainly on political analysis although it touches on other academic disciplines such as management or economic theory.

- 1 Introduction to Public Sector Management
- 2 The Theory of Bureaucracy
- 3 From Administration to Management
- 4 The need for reforms

Proofs of academic achievement: Oral Exam

ECONOMIC TUTORIAL

Language: english

Department: IEE - Institut für Entwicklungsforschung und Entwicklungspolitik

Degree programme: Master of Arts Development Management

Contact: Dr. Meik Nowak, 0234-32-22458, Meik.Nowak@rub.de

Module: Economic Tutorial

This module is taught entirely in English.

Course type: Seminar

Credit Points: 0

Teacher/Lecturer: Dr. Gabriele Bäcker

Requirements: Admission into the MA Development Management

Room	Day, Time	Begin
GB 1/144	Block	15.9.-19.9.

Course description:

The course is especially targeted at non-economists and enables those students not familiar with economic theories and approaches with the necessary understanding to successfully participate in subsequent economics-oriented courses.

The course teaches the basic concepts and tools of economic analysis. The course will mainly focus on microeconomics, i.e. the analysis of economic problems from the perspective of the individual which fits well to the actors-oriented approach of the program. In addition some macroeconomic-basics are covered.

- 1 Economic Theory
- 2 Microeconomics
- 3 Macroeconomics: Basic Concepts

Proofs of academic achievement: none

INSTITUTE FOR NEURAL COMPUTATION

MACHINE LEARNING: UNSUPERVISED METHODS

Language: English

Department: Institut für Neuroinformatik

Degree programme: Master

Contact: Dr. Rolf Würtz, 0234/32-27994, rolf.wuertz@ini.rub.de

Module: n.s.

This module is taught entirely in English.

Course type: Lecture and Tutorial

Credit Points: 2 (Lecture), 4 (Tutorial)

Teacher/Lecturer: Prof. Dr. Laurenz Wiskott

Requirements: Mathematics required include calculus (functions, derivatives, integrals, differential equations, ...), linear algebra (vectors, matrices, inner product, orthogonal vectors, basis systems, ...), and a bit of probability theory (probabilities, probability densities, Bayes' theorem, ...).

Room	Day, Time	Begin
NB 3/57	Tuesday, 12.00 - 13.30	09/10/12

Course description:

This course covers a variety of unsupervised methods from machine learning such as principal component analysis, independent component analysis, vector quantization, clustering, self-organizing maps, growing neural gas, Bayesian theory and graphical models. We will also briefly discuss reinforcement learning. The mathematical level of the course is mixed but generally high. The tutorial is almost entirely mathematical.

Criteria for a certificate for the tutorial are an active participation, in particular presentation of selected exercises, and at least 50% in the final exam.

This course can be given in English upon request. Course material (lecture notes and exercise sheets) will be in English in any case.

Proofs of academic achievement: written examination

COMPUTATIONAL NEUROSCIENCE: NEURAL DYNAMICS

Language: English

Department: Institut für Neuroinformatik

Degree programme: Master

Contact: Dr. Rolf Würtz, 0234/32-27994, rolf.wuertz@ini.rub.de

Module: n.s.

This module is taught entirely in English.

Course type: Lecture and Tutorial

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Gregor Schöner

Requirements: none

Room	Day, Time	Begin
NB 3/57	Thursday, 14.15 - 16.00	11/10/12

Course description:

This course provides an introduction into the theoretical cognitive and systems neurosciences from a particular theoretical vantage point, the dynamical systems approach. This approach emphasizes the evolution in time of behavioral and neural patterns as the basis of their analysis and synthesis. Dynamic stability, a concept shared with the classical biological cybernetics framework, is one cornerstone of the approach. Instabilities (or bifurcations) extend this framework and provide a basis for understanding flexibility, task specific adjustment, adaptation and learning.

The course includes tutorial modules which provide mathematical foundations. Theoretical concepts are exposed in reference to a number of experimental model systems which will include the coordination of movement, postural and configurational stability, the perception of motion and elementary forms of spatial cognition. In the spirit of Braitenberg's "synthetic psychology", autonomous robots will be used to illustrate some of the ideas.

Exercises are integrated into the lectures. They consist of elementary mathematical exercises, the design of (thought) experiments and their analysis and the design of simple artificial systems, all on the basis of the theoretical framework exposed in the main lectures.

Proofs of academic achievement: written examination

NEUROPLASTICITY

Language: English

Department: Institut für Neuroinformatik

Degree programme: Master

Contact: Dr. Rolf Würtz, 0234/32-27994, rolf.wuertz@ini.rub.de

Module: n.s.

This module is taught entirely in English.

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Markus Butz-Ostendorf

Requirements: Neurobiological basics are required (structure and function of the neuron and the synapse, propagation of electrical activity).

Room	Day, Time	Begin
NB 3/72	Thursday, 12.15-14.00	11/10/12

Course description:

Neural plasticity is defined as all changes of synaptic connections (connectivity) in neuronal networks. Changes in synaptic connectivity are of high impact for learning in neuronal networks. Hence, synaptic connectivity is thought as the substrate of the engram. However, structure-function relationship is extremely complex due to a reciprocal interaction of synaptic connectivity (structure) and electrical activity of neurons (function). Synaptic connectivity determines the flow of electrical activity while on the long-

term electrical activity alters synaptic connectivity. For example, pathways that transport dense electrical signals are strengthened while others are reduced. That in turn will change the flow of electrical activity and so on. Importantly, plasticity of inhibitory further complicates predicting the functional behavior of neuronal networks. Therefore, computational models are needed to gain a deeper inside into the relationship of structure and function. The seminar will focus on relevant literature and computational models in the field of neural plasticity.

The course will be given in English upon request. The seminar well complements courses of the Institut für Neuroinformatik by Dr. Jancke and Dr. Dinse (310 049).

Proofs of academic achievement: oral presentation

ARTIFICIAL NEURAL NETWORKS

Language: English

Department: Institut für Neuroinformatik

Degree programme: Bachelor

Contact: Dr. Rolf Würtz, 0234/32-27994, rolf.wuertz@ini.rub.de

Module: n.s.

This module is taught entirely in English.

Course type: Lecture and Tutorial

Credit Points: 5

Teacher/Lecturer: Dr. Rolf Würtz

Requirements: none

Room	Day, Time	Begin
HZO 100	Friday, 12.15-14.00	12/10/12

Course description:

This lecture presents standard algorithms and new developments of feedforward Artificial Neural Networks, their functioning, application domains, and connections to more conventional mathematical methods. Examples show the potential and limitations of the methods. Supervised as well as unsupervised learning methods are introduced.

In detail:

- 1) Introduction, some biological facts
- 2) Mathematical foundations: probability theory and partial derivatives
- 3) One layer networks and linear discriminants
- 4) Multilayer networks and error backpropagation
- 5) Universality of two-layer networks
- 6) Radial basis function networks
- 7) Neuronal maps: Kohonen network, Growing Neural Gas
- 8) Optimization methods

The course will be given in English upon request.

Proofs of academic achievement: oral presentation

INTERDISCIPLINARY CENTRE FOR ADVANCED MATERIALS SIMULATION (ICAMS)

MULTISCALE MODELLING IN MATERIALS SCIENCE

Language: English

Department: Interdisciplinary Centre of Advanced Materials Simulation

Contact: Rebecca Janisch, Room 1.06, Universitätsstr. 90a, 44789 Bochum, Tel: 0234/32 29304, Email: Rebecca.Janisch@rub.de, Consultation hours: n.s.

Degree programme: Master

Module: n.s

This module is taught entirely in English.

Course type: Lecture with exercises

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Alexander Hartmaier, Prof. Dr. Ingo Steinbach, Dr. Thomas Hammerschmidt

Requirements: Successful completion of module 2 or equivalent

Room	Day, Time	Begin
Cip-Pool 4.13 and 0.08	Tuesday, 10.00-14.00	09/10/2012

Course description:

Learning outcomes: The students gain knowledge about the different length and time scales on which the phenomena and mechanisms of material behaviour occur. They will furthermore understand the different levels to describe these phenomena and the existing approaches to bridge and integrate these scales, including their range of validity. They build up the skills to independently develop scale-bridging models that integrate all necessary scales and to employ these models to describe and predict materials behaviour under given conditions.

Proofs of academic achievement: practical exercises, written examination

This course is especially suitable for exchange students. Yes

ELEMENTS OF MICROSTRUCTURE

Language: English

Department: Interdisciplinary Centre of Advanced Materials Simulation

Contact: Rebecca Janisch, Tel: 0234/32 29304, Email: Rebecca.Janisch@rub.de

Degree programme: Master

Module: n.s.

This module is taught entirely in English.

Course type: Lecture

Credit Points: 3

Teacher/Lecturer: Prof. Dr. Gunther Eggeler, Prof. Dr. Victoria Yardley

Requirements: Bachelors degree in mechanical engineering, chemistry, physics, nanotechnology, mathematics or computer science or related disciplines

Room	Day, Time	Begin
IA1-21	Monday, 15.00-17.00	08/10/2012

Course description:

The students have a first qualitative and comprehensive view on material microstructures. They know about the specific features of amorphous and crystalline solids. Most importantly they can appreciate 0- to 3-dimensional crystal defects (vacancies, dislocations, interfaces, precipitates, inclusions, voids) as elements of microstructure and know about their basic properties (formation, thermodynamic aspects, atomistic and micromechanical aspects, influence on materials kinetics and materials strength). The students also learn about basic characterization techniques (microscopy and diffraction).

Proofs of academic achievement: written examination

This course is especially suitable for exchange students.

CONTINUUM METHODS IN MATERIALS SCIENCE

Language: English

Department: Interdisciplinary Centre of Advanced Materials Simulation

Contact: Rebecca Janisch, Tel: 0234/32 29304, Email: Rebecca.Janisch@rub.de

Degree programme: Master

Module: n.s.

This module is taught entirely in English.

Course type: Lecture with exercises

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Alexander Hartmaier, Prof. Ingo Steinbach

Requirements: Completion of Module 2b-N1 and Module 2b-E2 or equivalent

Room	Day, Time	Begin
Cip-Pool 4.13 and 0.08	Thursday, 14.00-16.30	11.10.2012

Course description:

Learning outcomes: Successful students understand the underlying principles of the finite element method to solve problems in solid mechanics with sound descriptions of the mechanical properties of materials and the phase field method to solve free boundary problems coupled to a thermodynamic material description. Both methods represent widely-used numerical tools in industrial and academic materials science. The students develop skills to model and solve materials science problems with the help of these two methods and they also understand the limitations of the methods and where they cannot be used.

Proofs of academic achievement: written examination

This course is especially suitable for exchange students.

ATOMISTIC SIMULATION METHODS

Language: English

Department: Interdisciplinary Centre of Advanced Materials Simulation

Contact: Rebecca Janisch, Tel: 0234/32 29304, Email: Rebecca.Janisch@rub.de

Degree programme: Master

Module: n.s.

Course type: Lecture/Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Ralf Drautz

Requirements: successfully completed modules 3a and 3b

Room	Day, Time	Begin
Cip-Pool 4.13 and 0.08	Monday, 9.00-10.30 and Thursday, 8.30-10.00	08/10/2012

Course description:

The students will be acquainted with models for the inter-atomic interaction and understand how these interactions can be represented by potentials. They learn how to use such molecular dynamics and kinetic Monte Carlo simulations to calculate the evolution of the atomic structure of materials and the resulting material properties. They understand the importance of the time and length scales in atomic modeling. The successful participants will be able to apply atomistic simulation methods to solve materials science problems.

Proofs of academic achievement: written examination

This course is especially suitable for exchange students.

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