

International Office

Gebäude FNO
Universitätsstrasse 150
44780 Bochum

Email: rubiss@rub.de
www.international.rub.de/rubiss

INTERNATIONAL COURSE CATALOGUE

SoSe 2011

Degree programmes, seminars and lectures
taught in English



Dear student, dear researcher, dear guest,

this is the International Course Catalogue (ICC) of the Ruhr-Universität Bochum, a project realized by RUBiss – RUB international student services at the International Office. The International Course Catalogue gives an overview on RUB's foreign language offers – for international students who want to organise their semester programme as well as students planning on studying in Bochum or partners and guests wanting to get a general idea on RUB's international courses and programmes.

It contains the following:

1. A list of **international (English) Master and PhD programmes**:
RUB offers several entire degree programmes in different disciplines that are taught entirely in English. The ICC informs on content, requirements and application procedure.
2. A compilation of **seminars and lectures (Bachelor, Master and PhD) held in English or another foreign language**:
Many departments of RUB offer seminars and lectures in English or other foreign languages. Those are usually NOT part of an international degree programme.
The ICC gives information on the content and requirements, as well as credit points and contact persons. Also, it is stated if courses are credited for the "Optionalbereich" and if they are especially suitable for exchange students.
3. **Additional information** on studying and researching international at RUB:
RUB's international profile, going abroad, 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 Catalog a helpful guide for your semester programme and wish you a good start for the new semester!

Your team of RUBiss –RUB International Student Services

CONTENT

RUB'S INTERNATIONAL PROFILE	3
STUDYING AT RUB.....	3
DOUBLE DEGREES.....	4
APPLICATION AND ADMISSION.....	6
THE INTERNATIONAL OFFICE.....	7
RUBISS – RUB INTERNATIONAL STUDENT SERVICES	7
WELCOME CENTRE FOR INTERNATIONALLY MOBILE RESEARCHERS.....	8
OUTGOING SERVICES	9
CONTACTS.....	11
INTERNATIONAL MASTER PROGRAMMES.....	13
INTERNATIONAL SEMINARS AND LECTURES	23
LANGUAGE COURSES.....	102

RUB'S INTERNATIONAL PROFILE

Internationalism traditionally has a very high priority at the Ruhr-Universität. The university cooperates in research and teaching through many active partnerships with universities and research institutes around the world. Members of all departments are involved in international research networks and maintain intensive international exchange. The Ruhr-Universität is a member of the Utrecht Network, where thirty large European universities cooperate on issues of internationalisation. Also beyond the European continent, the university has a high profile. Examples of this global commitment: in Shanghai the Ruhr-University supports the department of mechanical engineering at the Chinese-German University College at Tongji University, it is actively involved in academic reconstruction in Afghanistan, offers various degrees in South Africa at the South African-German Centre for Research Development and Criminal Justice at University of the Western Cap, Capetown, and together with its Ruhr university neighbours, is running liaison offices in New York and Moscow.

More than 4,500 international students from some 130 countries are currently at the Ruhr Universität – they appreciate the modern degree structures, the variety of subjects, the interesting cross-border research projects and the good support services on campus. Every year, the university welcomes some 300 visiting scholars from around the world, including a high number of scholarship holders from the Humboldt Foundation, and other renowned scientists. At five international graduate schools, doctoral students from around the world practice their research.

For students who wish to spend part of their degree abroad, the Ruhr-Universität also offers a host of opportunities. In exchange programmes with European partner universities alone, with over 350 collaborations from Finland to Italy and from Turkey to Portugal, there are places to study abroad in all degree courses. The number of Socrates/Erasmus students has doubled over the last five years, and the number of mobile students will continue to grow – facilitated by: expert advice on studying abroad, the further development of interesting degree courses with bi-national dual degree qualification and the extension of exchange agreements already actively underway.

STUDYING AT RUB

In the middle of the metropolitan Ruhr region in the heart of Europe, the Ruhr-Universität with its 20 faculties is home to 5,000 employees and over 31,000 students from 130 countries. The university was opened in 1965 after a construction period of only three years. It was the first new university to be established in Germany following the Second World War and was also the first university in the Ruhr area altogether. Today, it is one of the ten biggest universities in Germany.

The Ruhr-Universität offers research facilities and teaching in all major academic disciplines: humanities, natural sciences, engineering and medicine are all together on one campus. The university's greatest strength is its interdisciplinary cooperation, and there are a lot of special interdisciplinary and international Bachelors and Masters programmes for you to choose from. Altogether, the RUB offers approximately 150 bachelors and masters programmes in various combinations. The range of subjects is even bigger as the Ruhr-Universität cooperates with its neighbouring universities Dortmund and Duisburg-Essen to form the University Alliance Metropolis Ruhr (UAMR), and students can choose courses from all three universities.

The RUB changed to the Bachelors/Masters system before any other German university and therefore almost all degree programmes are offered with the Bachelors and Masters qualifications. Within your Bachelors studies, when choosing humanities or social sciences, you will usually study two subjects, while in natural and engineering sciences Bachelor programmes usually

consist of just one subject.

If you are enrolled in subjects at the Ruhr-Universität Bochum in the areas of humanities and social or natural sciences, you will also have to attend courses in the "options modules" (Optionalbereich), in addition to the subjects you have chosen. Therefore, courses that are credited for the "options modules" are marked in the International Course Catalogue.

DOUBLE DEGREES

Numerous double 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

Or:

Name: Stephanie Caspari

Email: Stephanie.b.caspari@rub.de

Double Degree in Philology with Universidad Oviedo

Without prolonging their studies, and 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 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

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 for three semesters.

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 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: Julia Figdor

Email: GenderStudies@rub.de

Double Degree in Law with Université François Rabelais Tours

Both double Bachelor's and double Master's degree, starting from WiSe 2011/12. The students spent two semesters together in Bochum and two in Tours. The awarded degree is "Bachelor" (RUB) and "Licence" (Tours) or "Master" in both Tour and Bochum.

Contact:

Name: Norman Heenemann

Email: Norman.Heenemann@rub.de

Or:

Name: Véronique Müller

Email: Veronique.Mueller@rub.de

Double Degree in Philology with Université François Rabelais Tours

Students of both partner universities can spend the last year of their studies at the partner institution. At the successful completion of their studies, the students are awarded a Master's degree of both RUB and Université Tours.

Contact:

Name: Jürgen Niemeyer

Email: Juergen.Niemeyer@rub.de

Consultation hours: Tuesday and Friday, 10.00-11.00 a.m.

Double Degree in German Studies with Universiteit Utrecht

By means of a partnership contract, it is possible to obtain degrees from both partner universities at the same time, without prolonging ones studies. It is possible to obtain a Bachelor's as well as a Master's degree. Students taking part in teacher training programmes can make use of this option as well.

Contact:

Name: Prof. Dr. Bernd Bastert

Email: Bernd.Bastert@rub.de

Or:

Name: Manfred Eickelmann

Email: Manfred.Eickelmann@rub.de

APPLICATION AND ADMISSION

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 to study at RUB:

Your **higher education entrance qualification** must be recognised as the equivalent to the German qualification. Your higher education entrance qualification (HZB) is your school leaving certificate or a proof of studies already completed. To qualify for admission at RUB, you must be able to prove that you have got a HZB for a German university.

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

Also, for most degree programmes, you need sufficient **German skills**. An exception are the International degree programmes stated in the first chapter of this brochure. Those Programmes have individual application procedures.

For successful studies in a regular course at the Ruhr- University, a high standard of German language skills are required. Language skills can be proven by 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

Application procedure can differ, depending on the country you are coming from and the subject you are planning to study at the RUB.

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

Please note the **application deadlines** at RUB:

Application period, winter semester: 15/05 - 15/07

Application period, summer semester: 15/11 - 15/01

THE INTERNATIONAL OFFICE

The International Office (IO) is responsible for all aspects of the University's international contacts and activities.

It fosters and coordinates the university's international relationships, builds contacts with partner universities and handles projects and programmes with foreign partners. In addition, it supports university faculties and chairs in building international relationships. Whilst the team from RUBiss looks after international students, the "Welcome Centre" was established to support international visiting academics. RUB students who want to go abroad as part of their studies, are also advised by the International Office.

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 and now combines all provisions and services for international students of the International Office. As well as support in the application and admission process or with administrative tasks and legal affairs concerning foreign nationals, you will find contact persons for other important issues which go beyond your academic studies, such as e.g. advice and support in social, cultural and study related affairs – there is always a sympathetic ear for you at RUBiss.

Both at the beginning of and during the semester, events are organised: On various excursions, you will have the opportunity to get to know your new surroundings, to settle in and to meet fellow students. Tutors and members of the RUBiss team are present at these events and are available to answer all of your questions in a relaxed atmosphere. RUBiss also provides offers that may be useful for your studies or your future career: During the last year, two new projects were started that get funding by the DAAD: „Praktika international“ and the “Rechtschreibkorrekturbüro”.

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 STUDENT SERVICES

RUBiss, International Office

Ruhr-Universität Bochum

FNO-Building

Email: RUBiss@rub.de

www.international.rub.de/rubiss

WELCOME CENTRE FOR INTERNATIONALLY MOBILE RESEARCHERS

Ruhr-Universität has set up a service point for internationally mobile researchers in order to make your stay with us as pleasant as possible for you and your family. The Welcome Centre in Bochum is registered as “local service point” in the EURAXESS network.

We are here to help you with all the necessary formalities and advise you on matters of everyday life in Germany. Our portfolio of services includes:

- Internet portal in German and English
- Helping you find accommodation
- Check lists for preparing your stay and negotiating the first few days after arrival
- Advice on formalities (visa, registration, health insurance)
- Supporting you in your dealings with the authorities
- Assistance in finding a kindergarten or school for your children
- International Lounge for visiting researchers
- Excursions and events for visiting scientists and scholars
- German courses at various levels

On our website you will find regularly updated information and links which should help you to organize your stay and manage everyday life. We also post information on current events and offers.

Please do not hesitate to turn to the team at the Welcome Centre if you have any questions, problems, wishes or suggestions. You can reach us by email, telephone or in person.

Just get in touch – we are here to help you!



Welcome Centre, International Office
Ruhr-Universität Bochum
FNO-Building

Email: welcome-centre@rub.de
www.rub.de/welcome-centre

OUTGOING SERVICES

Students who want to go abroad as part of their studies are advised at the Outgoing Services. On their website, you will find Information on studying and internships abroad, summer academies and language courses. You will get hints on organization, contact persons and financing.

RUB-students who want to study abroad can take part in the ERASMUS programme, in which RUB has some 244 partner universities, where students can spend 3 to 12 months, supported by a monthly mobility scholarship and many other benefits.

The ERASMUS programme also supports students who are doing a relevant internship in a country taking part in the ERASMUS programme.

For those wanting to study outside Europe, the International Office has different partner universities, where students can study one or two semesters without paying tuition fees. There are university wide partnerships with the following universities:

- Universidade Federal de Minas Gerais, Brazil
- Universidad de Monterrey, Mexico
- Universidad Autónoma de Nueva 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
- Kyungpook National University, Korea

The following universities provide RUB-students with a monthly scholarship in addition:

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

As a member of the Utrecht Network, RUB can offer exchange with the following universities in the course of the MAUI and AEN exchange programme:

MAUI-Exchange-Programme:

Baylor University Waco, TX	University of Missouri Columbia, MO
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

AEN-Exchange-Programme:

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	

A new worldwide programme supplementing the ERASMUS programme is PROMOS. In 2011, the International Office will offer 4 sub programmes, by which studying at partner universities of RUB, internships, study trips and stays for writing a final thesis can be supported. The PROMOS programme supports stays outside the ERASMUS-countries.

Outgoing Services, International Office
Ruhr-Universität Bochum
FNO-Building

Email: veronika.fuckel@uv.rub.de
www.international.rub.de/ausland

CONTACTS

Name	Contact
Office	
Isolde Hausmann	Room: FNO 01/184 Tel.: +49 (0) 234 32- 26801 E-Mail: Isolde.Hausmann@uv.rub.de Consultation Hours: Mon - Fri, 9 - 12 a.m. & 1:30 - 4 p.m.
Directors	
Monika Sprung	Room: FNO 01/182 Tel.: +49(0)234 32-25483 E-Mail: Monika.Sprung@uv.rub.de Consultation Hours: By appointment
Jutta Schmid	Room: FNO 01/186 Tel.: +49 (0) 234 32-28763 E- Mail: Jutta.Schmid@uv.rub.de Consultation Hours: By appointment
Application and Admission	
Karsten Alt	Room: FNO 01/172 Tel.: +49 (0) 234 32- 22199 E-Mail: Karsten.Alt@uv.rub.de Consultation Hours: Mon - Thu: 9 a.m. - 1 p.m. & 2 p.m. - 4 p.m. Fri: 9 a.m. - 1 p.m. & 2 p.m. - 3 p.m.
Angelika Tatang	Room: FNO 01/ 171 Tel.: +49 (0) 234 32- 23739 E-Mail: Angelika.Tatang@uv.rub.de Consultation Hours: Mon - Thu: 9 a.m.- 12 p.m.
Rubiss- RUB International Student Service	
Elena Díaz	Room: FNO 01/180 Tel.: +49 (0)234 32-22699 E-Mail: Elena.Diaz@uv.rub.de Consultation Hours: By appointment
Ruthild Schulte	Room: FNO 01/174 Tel.: +49 (0)234 32-25899 E-Mail: Ruthild.Schulte@uv.rub.de Consultation Hours: Mon- Thu, 10- 12 a.m.
Sarah Stücken	Room: FNO 01/176 Tel.: +49 (0)234 32-27676 E-Mail: Sarah.Stuecken@uv.rub.de Consultation Hours: Mon-Fri 10- 12 a.m. & 2- 3.30 p.m.

Outgoing Services	
Veronika Fuckel	Room: FNO 01/183 Tel.: +49 (0)234 32-28913 E-Mail: Veronika.Fuckel@uv.rub.de Consultation Hours: Mon, 3- 5 p.m. & Tue- Thu 10.30 a.m.- 12.30 p.m.
Welcome Centre	
Anna Gopon	Room: FNO 01/185 Tel.: +49 (0)234 32- 28824 E-Mail: Anna.Gopon@uv.rub.de Consultation Hours: By appointment
Serpil Yokus	Room: FNO 02/32 Tel.: +49 (0)234 32- 28420 E-Mail: Serpil.Yokus@uv.rub.de Consultation Hours: By appointment
Internationalisation	
Ulrike Herrlich	Room: FNO 01/185 Tel.: +49 (0)234 32-27676 E-Mail: Ulrike.Herrlich@uv.rub.de Consultation Hours: By appointment

INTERNATIONAL MASTER PROGRAMMES

The following chapter contains RUB's international Master and PhD programmes that are taught entirely in English.

FACULTY OF CHEMISTRY AND BIOCHEMISTRY	14
MASTER OF BIOCHEMISTRY	14
MASTER OF CHEMISTRY	15
COMPUTATIONAL ENGINEERING	16
COMPUTATIONAL ENGINEERING	16
INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY.....	17
PHD IN INTERNATIONAL DEVELOPMENT STUDIES	17
INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY.....	18
MASTER OF ARTS IN DEVELOPMENT MANAGEMENT	18
FACULTY OF GEOSCIENCES.....	19
MS.C. RESOURCES AND ENERGY (GEOSCIENCES).....	19
INSTITUTE FOR INTERNATIONAL LAW OF PEACE AND ARMED CONFLICT.....	20
JOINT EUROPEAN MASTER'S IN INTERNATIONAL HUMANITARIAN ACTION	20
FACULTY OF MECHANICAL ENGINEERING	21
MATERIALS SCIENCE AND SIMULATION	21

FACULTY OF CHEMISTRY AND BIOCHEMISTRY

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

Contact:

Name: Dr. Manfred Groß

Room: NC 02/128

Tel: 0234/32-24571

Email: chemie@rub.de

MASTER OF BIOCHEMISTRY

Language: English

Degree programme: MSc

Requirements: A qualified BSc (= a BSc with an average mark better than 2.5) in Biochemistry or a related subject, such as Molecular Biology, Biotechnology, Chemical Biology, or Chemistry with a major in Biochemistry)

Application Deadline: deadline for international students: 15/07/11

Begin: 10/10/2011

Course description:

The Master Course in "Biochemistry" builds on the foundations laid by a BSc in Biochemistry or a related subject. It constitutes the second step towards a comprehensive education and training in the sciences and methods necessary to understand and exploit the molecular and chemical basis of biological and physiological processes. The goal of this course is to enable the student to independently apply the theoretical and technical knowledge gained to tackle and solve open questions in the life sciences, either in academia or in industry.

To reach this goal students will receive up to 26 hours of teaching per week over a period of 3 semesters, a total of 77.5 hours, comprising 16 hrs of lectures, 12 hrs of seminars, and a full 49.5 hrs of practicals. In the fourth semester experiments for the Master thesis project will be performed with the goal to submit a thesis after 6 months.

A unique feature of the MSc Biochemistry in Bochum is the possibility to choose between six Focal Point Programmes in which all courses, starting with the 2nd semester, are geared towards a topic chosen at the end of the first semester. Available topics include a) Biochemistry of the Nervous System, b) Biomolecular Chemistry, c) Molecular Medicine, d) Proteins: Structure and Function, e) Molecular Biology and Biotechnology of Plants and Microorganisms and f) Stem Cell Biochemistry.

Further highlights of this Master Course include compulsory practical training in experimental approaches that use isotopes, a course that in addition to credit points yields a federal certificate required for Radiation Safety Officer duties in academia and industry; and a practical course in the handling of experimental animals, which is conducted in collaboration with the company Bayer HealthCare at their premises in Wuppertal.

The Faculty of Chemistry and Biochemistry appreciates if their Master students choose to spend one or more semesters abroad. The faculty supports this choice by unbureaucratically accepting courses taken abroad as equivalent if they fit the general philosophy of the Master Programme in Biochemistry at RUB.

MASTER OF CHEMISTRY

Language: English

Degree programme: MSc

Requirements: A qualified BSc (= a BSc with an average mark better than 2.5) in Chemistry or a related subject

Application Deadline: 15/07/11

Begin: 10/10/2011

Course description:

The Master Course in "Chemistry" builds on the foundations laid by a BSc in Chemistry or a related subject. It constitutes the second step towards a comprehensive education and training in chemistry comprising all aspects from organic and inorganic synthesis to physical and theoretical descriptions of chemical reactions. The goal of this course is to enable the student to independently apply the theoretical and technical knowledge gained to tackle and solve open questions in chemistry, either in academia or in industry.

To reach this goal students will receive a research orientated education comprising lectures and seminars but also, to a large extent, practicals. The first and second semester aim to provide an in depth-understanding in inorganic chemistry, organic chemistry and physical chemistry through lectures as well as a practicals in selected disciplines. The third semester allows the students to select a specialization practical including a 3-month practical. In the fourth semester experiments for the Master thesis project will be performed with the goal to submit a thesis after 6 months. A unique feature of the MSc in Chemistry at the Ruhr-University Bochum is the possibility to choose between a number of focal point programmes as specialization including organic, inorganic, physical, analytical, industrial ("Technische Chemie") and theoretical chemistry as well as interdisciplinary programmes such as functional materials. The practicals are mainly performed

in the different research groups using state of the art research equipment thus guiding the students

into research at an early stage. The research groups with PhD students and PostDocs from all over the world provide the basis for an education in an international environment.

The Faculty of Chemistry and Biochemistry appreciates if their Master students choose to spend one or more semesters abroad. The faculty supports this choice by unbureaucratically accepting courses taken abroad as equivalent if they fit the general philosophy of the Master Programme in Chemistry at RUB.

COMPUTATIONAL ENGINEERING

<http://compeng.rub.de>

Contact:

Name: Dipl.-Ing. Jörg Sahlmen
Room: IA 0/66
Tel: 0234/32-22103
Email: comp-eng@rub.de

Julia Lippmann, M.A.
IA 0/42
Tel: 0234/32-25485
Email: julia.lippmann@rub.de

COMPUTATIONAL ENGINEERING

Language: English

Degree programme: MSc

Requirements: A B.Sc. or comparable degree in an engineering sciences subject; profound English language skills, both written and spoken

Application Deadline: deadline for international students: 01/05/11

Begin: 10/10/2011

Course description:

The master's programme Computational Engineering focuses on the consolidation of knowledge in computer-oriented methods of Engineering Sciences. It provides to students key-skills in engineering mechanics, mathematics and computer science required for innovatively designing and analysing high-tech engineering systems and materials. Besides, the programme conveys so-called soft skills like the capacity for teamwork, the ability to manage conflict situations, and communication skills. It is exactly this unique blend of computer- and engineering-related knowledge with these soft skills which accounts for the high academic standard of the programme. The programme is thus especially designed to qualify students for the requirements of today's job market for engineers, opening them the doors to upper and top positions in the industry and at institutions of higher education.

The master's programme Computational Engineering has the following goals:

- The imparting of skills in the field of computer-oriented methods in Engineering Sciences to qualify students to perform complex tasks with an emphasis on simulation and modelling independently and on their own responsibility. The master's programme thus qualifies students for positions in research and development with managerial responsibility.
- The imparting of skills for writing academic theses on a post-graduate level.

In addition, the programme is aimed at enabling graduates to solve challenging problems in research and practice. At the same time, it aims at opening them the doors to various occupational fields on the international job market on the basis of 'global competencies'. In order to achieve these goals great emphasis is placed on research.

In its concept, the RUB Master programme is designed so as to include courses offered by various faculties, mainly the faculties of Civil- and Environmental Engineering (course coordination), Mechanical Engineering and Mathematics to offer students a highly sophisticated education, breeding tomorrow's specialists and executives.

For further details about our courses please go to: <http://compeng.rub.de>: Sub-item 'Curriculum'

INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY

www.development-research.org

Contact:

Name: Dr. Katja Bender

Room: GB 1/161

Tel: 0234/32-25149

Email: Katja.Bender@rub.de

PHD IN INTERNATIONAL DEVELOPMENT STUDIES

Language: English

Degree programme: PhD

Requirements: 1. Qualified university degree (Master or an equivalent to the German Diploma or Staatsexamen) with an overall grade equivalent to 2.7 (fully satisfactory) in the German grading system after completion of relevant studies with a duration of at least 4 years, or 2. Qualified degree with an overall grade equivalent to 1.7 (fully good) in the German grading system after completion of relevant studies with a duration of at least three years plus preparatory studies for the PhD of usually three semesters. For international degrees the equivalence will be judged during the application process. Candidates who have to follow preparatory studies before admission to the PhD in International Development Studies can be accepted for such preparatory studies at the Ruhr-University Bochum

Course description:

Starting from winter 2007, the Institute of Development Research and Development Policy offers a 3-year English-language PhD program in International Development Studies. It is implemented by the Institute of Development Research and Development Policy on behalf of the Faculties of Geography, Law, Social Science, and Economics. Annually up to 12 PhD candidates are accepted to the program. The PhD program in International Development Studies is a combination of working on individual PhD research projects as well as participating in selected teaching modules. Teaching modules deal with developmental issues from a multidisciplinary perspective. These seminars are complemented by courses on research methods and statistical analysis. Regular presentation and discussion of individual research projects form part of the semi-annual „Research Colloquium“ in which all PhD candidates as well as supervisors take part. A field research phase in the fourth semester forms an integral part of the PhD-program. Courses on “Generic Skills” include seminars on Scientific Writing, Scientific Presentation and Professional (Scientific) Communication. They aim at the training of key competences and are offered in cooperation with the Ruhr-University Bochum Research School.

INSTITUTE OF DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY

www.development-research.org

Contact:

Name: Dr. Meik Nowak
Room: BB 1/153
Tel: 0234/32- 22458
Email: Meik.Nowak@rub.de

MASTER OF ARTS IN DEVELOPMENT MANAGEMENT

Language: English

Degree programme: Master

Requirements: An above average B.A. or relevant degree in political science, social science, law, economics or geography or in other subjects related to the planning and evaluation of development programs and projects career experience in a relevant field; preference is given to candidates whose employers offer a reintegration guarantee. For DAAD scholarship applicants within the program "postgraduate courses with relevance to developing countries" at least two years career experience is required, other applicants shall demonstrate practical experience at least through a relevant internship. Minimum certified proficiency in written and spoken English -TOEFL: 79-80 points internet based (equivalent to 213 points computer based or 550 paper based) or IELTS: band 6

Application Deadline: 31/12/2011

Begin: September 2011

Course description:

The MADM is addressed to young professionals from all over the world with a B.A. or relevant degree and practical experience with relevance for development management who need further academic qualification for their future professional career in a field related to development management and cooperation. Since winter 2000, the Institute of Development Research and Development Policy has offered an international English-language Master Program in Development Management. Since May 2002, the program has also been offered at the University of the Western Cape, South Africa; originally as part of the DAAD initiative "German Programs of Study Abroad" and now as part of the DAAD funded "South African - German Centre for Development Research and Criminal Justice". The duration of each program cycle is three semesters (18 months). For each intake, up to 25 students are accepted in Bochum and up to 20 students in Cape Town.

The course starts every two years with the next intake in 2010. For international participants a German language course is offered from beginning of August. The program itself starts in September with a Summer School on Research Methods and Development Practice. In this introductory Summer School you will also meet with the students from the Cape Town intake, who started earlier and have by then already completed their first semester. Apart from coursework the Summer School usually includes a seminar on Inter-cultural Communication and Team Building as well as some excursions for you to get more familiar with Bochum, the region and Germany.

Proofs of academic achievement: n.s.

FACULTY OF GEOSCIENCES

INSTITUTE FOR GEOLOGY, MINERALOGY AND GEOPHYSICS

www.rub.de/sediment

Contact:

Name: Prof. Dr. Adrian Immenhauser
Room: NA 2/125
Tel: 0234/32- 0234/32-28250
Email: adrian.immenhauser@rub.de

MS.C. RESOURCES AND ENERGY (GEOSCIENCES)

Language: English

Degree programme: MSc

Requirements: B.Sc. in geosciences or related natural sciences, English language proficiency (written and spoken), and sufficient physical fitness to perform fieldwork

Application Deadline: 15/07/2011 for international students

Begin: 10/10/2011

Course description:

The Institute for Geology, Mineralogy and Geophysics offers a comprehensive two-year (four terms) M.Sc. programme in fundamental and applied geosciences.

The goal of this M.Sc. programme is to provide students with a solid background in geoscience disciplines that are particularly relevant for a subsequent employment in the industry (mainly hydrocarbon industry).

Main topics covered include sedimentology/stratigraphy, geophysics/seismic interpretation and structural geology/tectonics.

Additional topics include aspects of geo-engineering and hydrogeology.

Frontal class room instructions are complemented by practical laboratory courses and hands-on field training.

INSTITUTE FOR INTERNATIONAL LAW OF PEACE AND ARMED CONFLICT

www.ifhv.rub.de

Contact:

Name: Markus Moke
Room: NA 02/28
Tel: 0234/32-28258
Email: Markus.Moke@rub.de

JOINT EUROPEAN MASTER'S IN INTERNATIONAL HUMANITARIAN ACTION

Language: English

Degree programme: Master of Arts in Humanitarian Action

Requirements: Master's degree or equivalent

Application Deadlines:

ERASMUS MUNDUS 15/12/2010

NOHA and NOHA Mundus 15/03/2011

Begin: First week of September with the Intensive Programme (IP)

Course description:

The Joint European Master's in International Humanitarian Action is a inter-university, multidisciplinary postgraduate programme that provides high quality academic education and professional competencies for personnel working or intending to work in the area of humanitarian action. This European Master's Degree was created in 1993 as a result of concerted efforts on the part of the Network On Humanitarian Action (NOHA) Universities, working in close collaboration with the European Commission's Humanitarian Aid Office (ECHO) and Directorate-General for Education and Culture. This initiative was a response to a growing need from the humanitarian assistance community for higher educational qualifications specifically suited to addressing complex humanitarian emergencies. In addition to collaboration and support from the European Union, the programme has the backing of nongovernmental organisations (NGOs), inter-governmental organisations (IGOs), and other actors of the humanitarian relief community with whom the Network has strong collaborative links.

More than 15 years of experience have proved the Network's capacity to educate and train highly committed, interdisciplinary persons who can act at all levels of humanitarian relief operations and who can function in a variety of ways to enhance the delivery of humanitarian assistance and sustainable actions. Over 1800 NOHA graduated professionals work in the field of humanitarian relief and international co-operation as managers, administrators, researchers, evaluators, monitors, consultants, and representatives of international organisations and institutions. They hold positions of responsibility in all kinds of national and international intergovernmental and non-governmental organisations both in the field and at headquarters all around the world.

FACULTY OF MECHANICAL ENGINEERING

www.icams.de/mss

Contact:

Name: Prof. Dr. Alexander Hartmaier
Room: UHW 12/1211
Tel: 0234/32-29368
Email: alexander.hartmaier@rub.de

Dr. Manuel Piacenza
UHW 11/1105
Tel: 0234/32-29332
Email: mss@icams.de

MATERIALS SCIENCE AND SIMULATION

Language: English

Degree programme: MSc

Requirements: Bachelor (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, or Computer Sciences

Application Deadline:

Visa required: 15 March for winter term / 15 September for summer term (short track)

No visa required: 15 March for summer term (short track)/ 15 September for winter term

Begin: summer term: 04/04/2011 (preparatory courses for short track: 21/03/2011)

winter term 2011/12: 10/10/2011

Course description:

Maintaining and expanding societies' industrial and economic capacity has become increasingly dependent on the rapid availability of sophisticated materials designed for extreme conditions. At the same time, the life-cycles of materials have become shorter due to frequent adaptation to, or even new design for, specific requirements and environments. Advanced computer simulation has been established as a key tool for increasing the speed of materials development at reduced costs and will gain a wide importance in academic and industrial research and development.

The Master of Science programme „Materials Science and Simulation“ meets the need for material scientists trained in numerical simulation as well as experimental characterization and processing techniques. Moreover, theoretical and practical knowledge in numerical methods has proven to be one of the most decisive key qualifications of nationally and internationally successful materials scientists and this development is still to continue. The programme focuses on providing you with a thorough knowledge in materials science and hands-on experience with state-of-the-art numerical methods. Furthermore it will enable you to apply your practical skills and knowledge in experimental settings already during your studies.

In detail, the programme will provide you with:

- a comprehensive knowledge of materials science, physics and numerical methods
- practical experience and the necessary theoretical background in applying modern numerical and experimental methods on all relevant scales
- competence to plan and conduct key experiments in modern characterization and processing techniques
- the ability to apply advanced modelling and simulation methods
- the build-up of research competence by planning and conducting student research projects
- a thorough understanding of the interrelation between processing, structure and properties of materials
- hands-on experience in project-oriented teamwork, project management skills and interdisciplinary communication.

The Masters course combines compulsory lectures in materials science, physics, numerical methods on different length and time scales, and programming techniques. In the specialization areas lectures can be selected from the fields “modelling and simulation” or “processing and characterization.” The lectures typically combine teaching of the theoretical background with the practical application of the gained knowledge in terms of computer models or lab experience. First practical research experience is gained from the research project scheduled in the third semester. Furthermore, the complete fourth semester is dedicated to the Masters thesis project. A complete course description can be downloaded from www.icams.de/mss.

INTERNATIONAL SEMINARS AND LECTURES

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

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

FACULTY OF BIOLOGY AND BIOTECHNOLOGY.....	24
COMPUTATIONAL ENGINEERING	36
INSTITUTE FOR DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY	46
FACULTY OF ECONOMICS.....	55
FACULTY OF GEOSCIENCE	66
INTERDISCIPLINARY CENTRE OF ADVANCED MATERIALS SIMULATION (ICAMS)	71
FACULTY OF LAW	74
FACULTY OF MATHEMATICS.....	76
MEDICAL FACULTY.....	77
INST. PHYSIOLOGY	77
DEPARTMENT OF NEUROLOGY, ST. JOSEF HOSPITAL:	78
INSTITUT OF ANATOMIE.....	79
INSTITUTE FOR NEUROINFORMATICS.....	80
FACULTY OF PHILOLOGY	83
ENGLISH DEPARTMENT	83
FACULTY OF PHILOSOPHY AND EDUCATION.....	84
PHILOSOPHY DEPARTMENT	84
INSTITUTE OF EDUCATIONAL SCIENCE.....	88
FACULTY OF PHYSICS AND ASTRONOMY	90
FACULTY OF PSYCHOLOGY.....	92
FACULTY OF SOCIAL SCIENCE.....	96
FACULTY OF SPORTS SCIENCE	101
LANGUAGE COURSES.....	102
CENTER FOR FOREIGN LANGUAGE TRAINING.....	102

FACULTY OF BIOLOGY AND BIOTECHNOLOGY

<http://www.biologie.ruhr-uni-bochum.de/>

Contact:

Name: Dipl.-Biologin Skadi Heinzelmann

Room: ND 03/134

Tel: 0234-32-23142

Email: studienberatung-biologie@rub.de

Consultation hours: Mo - Thur: 9 - 11 h

SCIENCE MEETING / MITARBEITERSEMINAR: AKTUELLE FORSCHUNGSPROJEKTE

Language: English

Department: Faculty of Biology and Biotechnology, Geobotany

Degree programme: -

Module: Science Meeting

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 03 / 172	Wednesday, fortnightly 14:00 – 15:00	by arrangement

Course description:

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

Proofs of academic achievement: none

190 589 RESEARCH ACTIVITIES / PROGRESS REPORTS

Language: English

Department: Animal Physiology

Degree programme: n.s.

Module: n.s.

Course type: colloquium

Credit Points: n.s.

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

Requirements: n.s.

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

Course description:

Colloquium about research activities in the department of Animal Physiology. See also:
http://www.ruhr-uni-bochum.de/tierphys/index_en.htm

ADVANCED TUTORIAL (S-MODULE): AXON GENERATION AND SYNAPTOGENESIS (190 372)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner

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 axon generation and synaptogenesis. The focus lies on the influence of the extracellular matrix. Issues are inter alia the primary culture of neurons from different brain regions and of glial cells and the culture of defined glial cell lines. The analysis is based on immunocytology and the use of immunofluorescence techniques, biochemical studies and the characterization of expressed genes, Western blot, immunoprecipitation and the biochemical and molecular characterization of the extracellular matrix.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): NEURON-GLIA BIOLOGY AND SYNAPTIC PLASTICITY (190 373)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, M. Geissler

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 Klicken Sie hier, um Text einzugeben.		

Course description:

The module addresses the molecular basis of the interaction between neurons and glia cells. The focus lies on the influence of the extracellular matrix. Issues are inter alia the primary culture of neurons from different brain regions and of glial cells and the culture of defined glial cell lines. Long-term cultures are used to analyse synaptic plasticity under defined conditions. The analysis is based on immunocytology and the use of immunofluorescence techniques, biochemical studies and the characterization of expressed genes, Western blot, immunoprecipitation and the biochemical and molecular characterization of the extracellular matrix.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): TRANSCRIPTION FACTORS AND REGULATION OF NEURAL STEM CELLS (190 374)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is 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	Klicken Sie hier, um Text einzugeben.	

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, written protocol

This course is especially suitable for exchange students.

ADVANCED TUTORIAL (S-MODULE): ANALYSIS OF PROTEIN TYROSIN PHOSPHATASES IN NEURAL STEM CELLS (190 375)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, 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, written protocol

ADVANCED TUTORIAL (S-MODULE): INFLUENCE OF ECM MOLECULES ON SYNAPTOGENESIS (190 377)

Language: ger/ eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. T. Sobik

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 synaptogenesis and especially the influence of the extracellular matrix. Issues are inter alia the primary culture of neurons from different brain regions and of glial cells and the culture of defined glial cell lines. The analysis is based on immunocytology and the use of immunofluorescence techniques, biochemical studies and the characterization of expressed genes, Western blot, immunoprecipitation and the biochemical and molecular characterization of the extracellular matrix.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): GLYCOBIOLOGY OF NEURAL STEM CELLS (190 378)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, E. Hennen

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 S-module provides the basis of protein biochemistry, molecular biological, and immunological methods in cell and developmental biology. The focus lies on the study of glycoproteins of the central nervous system. This projects deals with scientific questions in the current research process. Depending on the focus of the project some of the following methods are taught and used independently: immunocytochemistry, immunohistochemistry, RT-PCR, Western blot, in situ hybridization, cloning, plasmid purification, cell culture of primary tissue, culture of cell lines, production and purification of monoclonal antibodies.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): EXTRACELLULAR MATRIX AND DIFFERENTIATION OF RETINAL STEM CELLS (190 379)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, M. Besser

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 of mammals. One focus is the role of Phosphotyrosinphosphatases in this context. It will cover following items: primary culture of retinal ganglion cells of the nervous system, culture defined glial cell lines, immunocytology of defined neural antigens in the visual system using

immunofluorescence techniques, fluorescence and confocal laser scanning microscopy, biochemical studies on tissues of the visual system and characterization of expressed genes, Western blot, immunoprecipitation, biochemical and molecular characterization of receptor phosphotyrosine phosphatases of the visual system, transfection and ectopic expression of PTPs, functional assays in co-cultures, functions and properties of retinal stem cells.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): NEURAL STEM CELLS IN THE SPINAL CORD (190 380)

Language: ger/ eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, M. Karus

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 offers an insight into cell biological approaches for the treatment of developmental issues, primarily to control the differentiation of neural stem cells. It includes biochemical studies on neural stem cells, characterization of expressed genes, the processing of the mechanisms of stem cell differentiation, approaches for the characterization of differential gene expression, control of neural stem cell differentiation by extracellular matrix, the control of stem cell proliferation and transgenic animal models. There techniques of immunohistochemistry, biochemistry, cell biology and molecular biology come to use. We use fluorescence microscopy, laser scanning microscopy, video microscopy and electron microscopy of biological specimens for the morphological characterization.

Proofs of academic achievement: seminar, written protocol

ADVANCED TUTORIAL (S-MODULE): BIOTECHNOLOGICAL METHODS IN MOLECULAR NEUROBIOLOGY (190 381)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

Teacher/Lecturer: Prof. Dr. A. Faissner, Dr. U. Theocharidis, Dr. T. Sobik, 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, written protocol

ADVANCED TUTORIAL (S-MODULE): TUMOR STEM CELLS AND BIOLOGY OF GLIAL TUMORS (190 382)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is 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, written protocol

ADVANCED TUTORIAL (S-MODULE): BIOLOGY OF MYELIN PRODUCING CELLS (190 386)

Language: ger/ eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: BSc / MSc

Module: n.s.

This module is taught entirely in English.

Course type: practical course

Credit Points: 15

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

Oligodendrocytes in the central and Schwann cells in the peripheral nervous system stand in the focus of this course. With primary cell cultures and cell lines we analyse the molecular biological basis of the interaction between myelin producing glia cells and neurons. We use histological and immunocytochemical approaches for the analysis of these cells in the developing nervous system. Methods: culture of primary cells and cell lines, RT-PCR, Western blot, in situ hybridization, immunocyto-/histochemistry, fluorescence microscopy, laser scanning microscopy, video microscopy.

Proofs of academic achievement: seminar, written protocol

COLLOQUIUM: ACTUAL RESULTS IN CELL BIOLOGY AND MOLECULAR NEUROBIOLOGY (190606)

Language: English

Department: Cell Morphology and Molecular Neurobiology

Degree programme: any

Module: n.s.

This module is 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. T. Sobik

Requirements: none

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

Course description:

scientists from the department present actual research results.

Proofs of academic achievement: oral presentation

SEMINAR / LITERATURE CLUB: ACTUAL PUBLICATIONS IN MOLECULAR AND CELLULAR NEUROBIOLOGY (190552)

Language: English

Department: Cell Morphology and Molecular Neurobiology

Degree programme: any

Module: n.s.

This module is taught entirely in English.

Course type: seminar

Credit Points: 1,0

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

Requirements: none

Room	Day, Time	Begin
NDEF 05/	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

MODERN METHODS IN LIFE SCIENCES: ANALYSES OF RECEPTOR PHOSPHOTYROSIN PHOSPHATASES IN THE VISUAL SYSTEM (190806)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: PhD

Module: n.s.

This module is taught entirely in English

Course type: introductory course

Credit Points: 1 / 1,5 / 2

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

Requirements: Master degree

Room	Day, Time	Begin
according to prior agreement		

Course description:

Theoretical and practical information is given about the cell biological and molecular biological analysis of receptor tyrosin phosphatases. Depending on the agreements the course can be attended for 3 to 5 days.

Proofs of academic achievement: n.s.

MODERN METHODS IN LIFE SCIENCES: CULTURE AND ANALYSIS OF EMBRYONIC HIPPOCAMPAL NEURONS UNDER DEFINED CONDITIONS, OF RETINAL GANGLION CELLS AND OF NEUROSPHERES (190805)

Language: ger/eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: PhD

Module: n.s.

This module is taught entirely in English

Course type: introductory course

Credit Points: 1 / 1,5 / 2

Teacher/Lecturer: Prof. Dr. A. Faissner, M. Geissler

Requirements: Master degree

Room	Day, Time	Begin
according to prior agreement		

Course description:

Theoretical and practical information is given about the cell biological and molecular biological analysis of receptor tyrosin phosphatases. Depending on the agreements the course can be attended for 3 to 5 days.

Proofs of academic achievement: n.s.

**MODERN METHODS IN LIFE SCIENCES: VIDEO MICROSCOPY AND
CONFOCAL LASER SCANNING MICROSCOPY (190807)**

Language: ger/ eng

Department: Cell Morphology and Molecular Neurobiology

Degree programme: PhD

Module: n.s.

This module is 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, 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.

COMPUTATIONAL ENGINEERING

<http://compeng.rub.de>

Contact:

Dipl.-Ing. Jörg Sahlmen
Tel: 0234/32-22103
Email: comp-eng@rub.de

Julia Lippmann, M.A.
Tel: 0234/32-25485
julia.lippman@rub.de

ADVANCED FINITE ELEMENT METHODS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Advanced Finite Element Methods

This module is taught entirely in English.

Course type: Lecture 2h / Exercise 2h

Credit Points: 6

Teacher/Lecturer: Prof. Dr. tech. Günther Meschke and assistants

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basics in mathematics, mechanics and structural analysis, good knowledge in Finite Element Methods in Linear Structural Mechanics

Room	Day, Time	Begin
IA 6/21	Mon 08:30 – 11:45	See blackboard notice at the respective department

Course description:

Based upon a brief summary of non-linear continuum mechanics the weak form of non-linear elastodynamics, its consistent linearization and its finite element discretization are discussed and, in a first step, specialized to one-dimensional spatial truss elements to understand the principles of the formulation of geometrically nonlinear finite elements. In addition, an overview on nonlinear constitutive models including elasto-plastic and damage models is given. The second part of the lecture is focussed on algorithms to solve the resulting non-linear equilibrium equations by load- and arc-length controlled Newton-type iteration schemes. Finally, the non-linear finite element method is used for the non-linear stability analysis of structures.

The lectures are supplemented by exercises to support the understanding of the underlying theory and to demonstrate the application of the non-linear finite element method for the solution of selected examples. Furthermore, practical applications of the non-linear finite element method are demonstrated by means of a commercial finite element programme.

Proofs of academic achievement: Written examination, student projects and presentations

This course is especially suitable for exchange students.

COMPUTATIONAL FLUID DYNAMICS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Computational Fluid Dynamics

This module is taught entirely in English.

Course type: Lecture / Exercise

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Christiane Helzel, Dr. M. Lipinski, Prof. Dr. Rüdiger Verfürth

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge on partial differential equations and their variational formulation, finite element methods, numerical methods for the solution of large linear and non-linear systems of equations

Room	Day, Time	Begin
IA 5/21 (Tue); IA 2/56 (Thu)	Tue and Thu 12:15 – 13:45	See blackboard notice at the respective department

Course description:

1st week: Modelization

velocity, Lagrangian / Eulerian representation; transport theorem, Cauchy theorem; conservation of mass, momentum and energy; compressible Navier-Stokes / Euler equations; nonstationary incompressible Navier-Stokes equations; stationary incompressible Navier-Stokes equations; Stokes equations; boundary conditions

2nd week: Notations and auxiliary results

differential operators; Sobolev spaces and their norms; properties of Sobolev spaces; finite element partitions and their properties; finite element spaces; nodal bases

3rd week: FE discretization of the Stokes equations. 1st attempt

Stokes equations; variational formulation in $\{\text{div } u = 0\}$; non-existence of low-order finite element spaces in $\{\text{div } u = 0\}$; remedies

4th to 5th week: Mixed finite element discretization of the Stokes equations

mixed variational formulation; general structure of finite element approximation; an example of an instable low-order element; inf-sup condition; motivation via linear systems; catalogue of stable elements; error estimates; structure of discrete problem

6th week: Petrov-Galerkin stabilization

idea: consistent penalty term; general structure; catalogue of stabilizations; connection with bubble elements; structure of discrete problem; error estimates; choice of stabilization parameters

7th week: Non-conforming methods

idea; most important example; error estimates; local solenoidal bases

8th week: Streamline formulation

stream function; connection to bi-Laplacian; FE discretizations

9th week Numerical solution of the discrete problems

general structure and difficulty; Uzawa algorithm; improved version of Uzawa algorithm; multigrid; conjugate gradient variants

10th week: Adaptivity

aim of a posteriori error estimation and adaptivity; residual estimator; local Stokes problems; choice of refinement zones; refinement rules

11th week: FE discretization of the stationary incompressible Navier-Stokes equations variational problem; finite elements discretization; error estimates; streamline-diffusion stabilization; upwinding

12th week: Solution of the algebraic equations

Newton iteration and its relatives; path tracking; non-linear Galerkin methods; multigrid

13th week: Adaptivity

error estimators; type of estimates; implementation

14th week: Finite element discretization of the instationary incompressible Navier-Stokes equations variational problem; time-discretization; space discretization; numerical solution; projection schemes; characteristics; adaptivity

14th week: Space-time adaptivity

Overview; residual a posteriori error estimator; time adaptivity; space adaptivity

14th week: Discretization of compressible and inviscid problems

Systems in divergence form; finite volume schemes; construction of the partitions; relation to finite element methods; construction of numerical fluxes.

Proofs of academic achievement: Written examination

This course is especially suitable for exchange students.

COMPUTATIONAL MODELLING OF SUBSURFACE TRANSPORT PROCESSES

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Computational Modelling of Subsurface Transport Processes

This module is taught entirely in English.

Course type: n.s.

Credit Points: 5

Teacher/Lecturer: Prof. Dr.-Ing. C. Koenig

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; Mathematics, Fluid Mechanics (Bachelor), Numerical Methods in Engineering; FEM in Linear Structural Mechanics

Room

CAE Pool IA 6/56

Day, Time

Tue 14:15 – 15:45, Fri 14:00
– 14:45

Begin

See blackboard notice at the respective department

Course description:

Physical phenomena in porous and fractured media

- Confined and unconfined flow
- Variable saturated media

- Seepage flow
- Advection-dispersion model
- Linear adsorption
- Multiphase flow
- Density dependent flow
- Matrix diffusion in fractured media
- Energy transport
- Cubic law
- Reactive transport
- Heterogeneity
- Non Darcy flow

Numerical methods

- Particle tracking
- Random walk
- Finite element method
- Method of characteristics
- Least square method
- Preconditioned conjugate gradient solver
- Operator split technique
- Upwind methods
- Optimisation for inverse modelling
- Stochastic generation of fractures

Application

- Practical projects (project studies, optional: case-studies)

Proofs of academic achievement: Oral examination

This course is especially suitable for exchange students.

CONCRETE ENGINEERING AND DESIGN

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Concrete Engineering and Design

This module is taught entirely in English

Course type: Lecture 2h / Exercise 2h

Credit Points: 6

Teacher/Lecturer: Prof. Dr.-Ing Mark and assistants

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge in structural engineering, mechanics of beams, reinforced concrete design and material properties

Room

IA 4/56

Day, Time

Mon 11:30 – 13:00; Thu
08:30 – 10:00

Begin

See blackboard notice at the
respective department

Course description:

The module includes the following topics:

- principles and safety concept of Eurocode 2
- material properties and modelling
- bending and shear design
- design principles using spreadsheet analyses and optimisation methods
- moment-curvature-relations
- numerical section modelling (fibre model)
- strut-and-tie-modelling
- redistribution of sectional forces
- principles of pre-stressing:
- methods of pre-stress application
- time-variant and time-invariant losses
- calculation of deviation forces
- application in FE-methods
- application of mathematical software in nonlinear calculations
- optional: case study according to WP15 or W13

Proofs of academic achievement: written examination

This course is especially suitable for exchange students.

CONTINUUM MECHANICS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Continuum Mechanics

This module is taught entirely in English.

Course type: Lecture / exercise

Credit Points: 6

Teacher/Lecturer: Prof. Dr. rer. nat. K. Hackl

Requirements: Ideally a B.Sc. degree in an engineering sciences subject

Room	Day, Time	Begin
IA 3/56 (Tue); IA 6/21 (Wed)	Tue 08:30 – 10:00; Wed 08:30 – 10:00	See blackboard notice at the respective department

Course description:

The course starts with an introduction to the advanced analytical techniques of linear elasticity theory, then moves on to the continuum-mechanical concepts of nonlinear elasticity and ends with the discussion of material instabilities and microstructures. Numerous examples and applications will be given.

- Advanced Linear Elasticity
- Beltrami equation

- Navier equation
- stress-functions
- scalar- and vector potentials
- Galerkin-vector
- Love-function
- solution of Papkovich - Neuber
- Nonlinear Deformation
- Strain tensor
- Polar decomposition
- stress-tensors
- equilibrium
- strain-rates
- Nonlinear Elastic Materials
- Covariance and isotropy
- Hyperelastic materials
- constrained materials
- Hypoelastic materials
- objective rates
- material stability
- microstructures

Proofs of academic achievement: Written examination

This course is especially suitable for exchange students.

DYNAMICS AND ADAPTRONICS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Dynamics and Adaptronics

This module is taught entirely in English

Course type: Lecture 2h / Exercise 2h

Credit Points: 6

Teacher/Lecturer: Prof. Dr.-Ing Nestorovic / Appl. Prof. Dr. rer.nat. Le

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge in structural mechanics, control theory and active mechanical structures

Room

CAE Pool IA 3/152

Day, Time

Wed 10:15 – 11:45; Fri
12:00 – 13:45

Begin

See blackboard notice at the
respective department

Course description:

The course introduces the first principles of the dynamics of discrete and continuous mechanical systems: Newton laws and Hamilton variational principles. The force and energy methods for deriving the equation of motion for systems with a finite number of degrees of freedom as well as

for continuous systems are demonstrated. The energy conservation law for conservative systems and the energy dissipation law for dissipative systems are studied. Various exact and approximate methods for solving dynamical problems, along which the Laplace transform method, the method of normal mode for coupled systems, and the Rayleigh method are developed for the free and forced vibrations. Various practical examples and applications to resonance and active vibration control are shown.

Further, an overall insight of the modelling and control of active structures is given within the course. The terms and definitions as well as potential fields of application are introduced. For the purpose of the controller design for active structural control, the basics of the control theory are introduced: development of linear time invariant models, representation of linear differential equations systems in the state-space form, controllability, observability and stability conditions of control systems. The parallel description of the modelling methods in structural mechanics enables the students to understand the application of control approaches. Finite element modelling is an important prerequisite in structural control. Basics of the numerical model development are introduced. Control methods include time-continuous as well as discrete-time controllers in the state space for multiple-input multiple-output systems, as well as methods of the classical control theory for single-input single output systems. Differences and analogies between continuous and discrete time control systems are specified and pointed out on the basis of a pole placement method. Closed-loop controller design for active structures is explained. Different application examples and problem solutions show the feasibility and importance of the control methods for structural development. The term, design and implementation of observers in the controller design are introduced in terms of the practical aspects of structural control.

Proofs of academic achievement: written examination

This course is especially suitable for exchange students.

FINITE ELEMENT METHOD FOR NONLINEAR ANALYSIS OF INELASTIC MATERIALS AND STRUCTURES

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Finite Element Method for Nonlinear Analysis of Inelastic Materials and Structures

This module is taught entirely in English.

Course type: Lecture / Exercise

Credit Points: 3

Teacher/Lecturer: Prof. Dr. tech. Meschke

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge of tensor analysis, continuum mechanics and linear Finite Element Methods is required, participation in the lecture „Advanced Finite Element Methods” (CE-WP04) is strongly recommended

Room
IA 6/21

Day, Time
Mon 12:30 – 14:30

Begin
See blackboard notice at the
respective department

Course description:

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

Proofs of academic achievement: Project work and final student presentation

This course is especially suitable for exchange students.

FINITE ELEMENT TECHNOLOGY

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Finite Element Technology

This module is taught entirely in English.

Course type: Lecture / Exercise

Credit Points: 3

Teacher/Lecturer: Dr.-Ing. S. Ilic

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge of tensor analysis, continuum mechanics and Linear Finite Element Methods

Room	Day, Time	Begin
IA 3/56	Thu 10:15 – 11:45	See blackboard notice at the respective department

Course description:

The design of effective, enhanced finite element formulations avoiding locking effects is the goal of this course. For that purpose, the error estimation typical for this numerical procedure is elaborated first. In addition to a purely mathematical definition, an engineering interpretation of locking effects is discussed by means of illustrative examples. Subsequently, different state-of-the-art approaches eliminating the aforementioned effect are discussed in detail. These include:

- Reduced integration.
- Mixed finite element formulations.
- Enhanced Assumed Strain (EAS) concept.
- The examples consider the theory of small as well of finite deformations

Proofs of academic achievement: Written examination

This course is especially suitable for exchange students.

FLUID DYNAMICS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Fluid Dynamics

This module is taught entirely in English.

Course type: Lecture / Exercise

Credit Points: 3

Teacher/Lecturer: Prof. Dr.-Ing. R. Hoeffler and assistants

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; Fluid Mechanics (B. Sc. Level)

Room	Day, Time	Begin
IA 4/56	Tue 10:15 : 11:45	See blackboard notice at the respective department

Course description:

The technical basics of dynamic fluid flows are introduced, studied and recapitulated as well as related problems which are relevant for practical applications and solution procedures with an emphasis put on computational aspects. The lectures and exercises contain the following topics:

- short review of hydrostatics and dynamics of incompressible flows involving friction (conservation of mass, energy and momentum, Navier-Stokes equations)
- potential flow
- isotropic turbulence and turbulence in a boundary layer flow
- flow over streamlined and bluff bodies

The students are guided in the exercises to working out assessment and solution strategies for related, typical technical problems in fluid dynamics.

Proofs of academic achievement: Written Examination

This course is especially suitable for exchange students.

NUMERICAL METHODS AND STOCHASTICS

Language: English

Department: Computational Engineering

Degree programme: Master

Module: Numerical Methods and Stochastics

This module is taught entirely in English.

Course type: Lecture / Exercise

Credit Points: 6

Teacher/Lecturer: Prof. Dr. H. Dehling, Prof. Dr. R. Verfürth

Requirements: Ideally a B.Sc. degree in an engineering sciences subject; basic knowledge of partial differential equations, numerical methods and stochastics

Room	Day, Time	Begin
NA 6/99 (Mon); IA 2/56 (Wed)	Mon 15:15 – 16:45; Wed 12:30 – 14:00	See blackboard notice at the respective department

Course description:

Numerical Methods:

- Boundary value problems for ordinary differential equations (shooting, difference and finite element methods)
- Finite element methods (short retrospective preparing subsequent material)
- Efficient solvers (preconditioned conjugate gradient and multigrid algorithms)
- Finite volume methods (systems in divergence form, discretization, relation to finite element methods)
- Nonlinear optimization (gradient-type methods, derivative-free methods, simulated annealing)

Stochastics:

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

Proofs of academic achievement: Written Examination

This course is especially suitable for exchange students.

INSTITUTE FOR DEVELOPMENT RESEARCH AND DEVELOPMENT POLICY

<http://www.development-research.org>

Contact:

MADM: Dr. Maik Nowak
GB 1/162
Tel: 0234-3222458
Email: meik.nowak@rub.de
Consultation hours: Tuesday 10-12

PhD: Dr. Katja Bender
Room: GB 1/161
Tel: 0234/3226149
Email: Katja.Bender@rub.de
Consultation hours: n.s.

PLANNING, MONITORING, AND EVALUATION

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: The managerial Cycle

This module is entirely taught in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dipl.-Ök. Marco Rimkus/ Dipl.-Ök. Britta Niklas

Requirements: Admission to the MA in Development Management

Room	Day, Time	Begin
GB 1/144	Each day 9.00-15.00	16.5. – 27.5.2011

Course description:

Students understand the need for planning and evaluation in development cooperation and know of common "pitfalls"; have gained insight into common procedures of project and programme management (with a focus on German organisations of development cooperation); are able to select and apply appropriate planning, monitoring & evaluation approaches in different types of projects and planning contexts.

Proofs of academic achievement: Written Examination

FINANCIAL MANAGEMENT

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: The managerial Cycle

This module is entirely taught in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dipl.-Ök. Marco Rimkus

Requirements: Admission to the MA in Development Management

Room	Day, Time	Begin
GB 1/144	Each day 9.00-15.00	14.6. – 17.6. 2011

Course description:

Students' understanding of financial management tools and general problems of financial management in the context of development cooperation is extended. Students are able to understand and prepare basic financial reports. They are able to understand the relevance of financial management instruments for the success of development projects and programmes.

Structure:

- 1 Accounting and Finance in Development Organisations
- 2 Financial Management Problems
- 3 Public Budget Management

Proofs of academic achievement: Written Examination

PUBLIC SECTOR REFORMS

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: n.s.

This module is entirely taught in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Meik Nowak

Requirements: Admission to the MA in Development Management

Room	Day, Time	Begin
GB 1/144	Each day 9.00-15.00	18.7. – 22.7.2011

Course description:

Students are aware of general problems of public sector reform in the context of development cooperation. They are able to understand why corruption is seen as a major threat to development.

They are especially be able to understand the relevance of corruption-decreasing instruments for the success of development projects and programmes.

Reforms of the public sector can have quite different scopes ranging from privatisation issues to decentralisation approaches and to Good Governance and the fight against corruption. Students can choose the focal area of this course in accordance to their own needs.

What follows is a description of the course structure if corruption is chosen:

Definition of Corruption

The Perception of Corruption in modern societies

Corruption as a multidimensional phenomenon

Economic Aspects of Corruption

Political Aspects of Corruption

Social Aspects and Attitudes of Corruption

Methods to battle Corruption

Proofs of academic achievement: Oral Examination

PUBLIC POLICY AND REFORM MANAGEMENT

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: Management of Reforms

This module is entirely taught in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dipl.-Ök. Iris Vernekohl

Requirements: Admission to the MA in Development Management

Room	Day, Time	Begin
GB 1/144	Each day 9.30-15.00	26.4. – 30.4.2011

Course description:

This course focuses on understanding the causes of the successes and failures of real world developmental reforms in different countries, contexts, and sectors. The students are familiarised with the various determinants of successfully managing developmental reforms, i.e. of initiating, implementing and enforcing change. A special focus is on behavioural, political-economic, institutional, and cultural aspects of reform success and failure. In addition, students have gained a deeper insight into the specific aspects and challenges of institutional reforms at different levels and of the reforms of social and economic policies.

Amongst others, this may include an indepth analysis of public service delivery reforms (water and electricity), reforms of the multilateral foreign aid system, social protection reforms (health, pensions etc), regulatory reforms, organisational reforms, environmental reforms, and

democratisation/ systems change.

The course makes use not only of applied theoretical analysis but comprises also a strong tools-oriented component (e.g. political and institutional feasibility analysis tools etc). From a methodological point of view, the course enables students to deepen their analytical, strategic, (inter-cultural) communicative, negotiation, and decision-making skills.

Proofs of academic achievement: Written Essay

CRISIS PREVENTION & CONFLICT MANAGEMENT

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: n.s.

This module is entirely taught in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Meik Nowak / Dipl.Soz.wiss. Stefan Buchholz

Requirements: Admission to the MA in Development Management

Room	Day, Time	Begin
GB 1/144	Each day 9.00-15.00	01.08. – 05.08.2011

Course description:

This course is designed to sensitize students for the importance of conflict as a cross-cutting issue in development politics. Besides giving students a broad theoretical overview to conflict studies and their relevance for development, the course intends to familiarise students with conducting a systematic and logframe-related practical exercise of conflict related development projects. It thus enhances students ability to take a comprehensive and critical perspective on instruments of development management.

The course starts with an introduction to theories of conflict, conflict management and conflict transformation highlighting also the different levers of intervention.

It also gives an overview on how conflict issues reached the agenda of development politics, both by sensitizing development actors on the conflict impact of general developmental interventions, but also by pro-actively contributing to peace-building and conflict transformation using the instruments of development policies. This will be strongly linked to the general research context of weak and failing states and problems regarding the implementation of projects and programs. The third part of the course is the practical design of development projects by the students, highlighting selected aspects of the project management cycle, i.e. planning (SCA, Logframe) and evaluation. The projects are fictitious in the sense that they are the products of the lecturer's imagination (to better highlight specific problems of project management). At the same time they closely resemble real projects that the lecturer knows from own experience and they also combine typical features of project management styles by different development agencies. Here exists a

strong linkage with the course of “Planning, Monitoring and Evaluation” and one focus lies on this explicit experimental game character of the practical part.

Proofs of academic achievement: Presentation and Short Paper

ECONOMIC EVALUATION METHODS

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: Master of Arts Development Management

Module: The managerial Cycle

This module is entirely taught in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Wilhelm Löwenstein

Requirements: Admission to the MA in Development Management. It is strongly recommended that the students prepare the lecture by repeating the Economic Tutorial.

Room	Day, Time	Begin
GB 1/144	Thursday, 14.00 – 16.00	28/04/2011

Course description:

The students are able to discriminate between the different perspectives of evaluation. If confronted with an evaluation report – be it an academic article or a report written by a practitioner – they know how to judge the reliability of the published results as they have deepened their knowledge on the scope and the limitations of evaluation methods.

Furthermore the participants are able to do own economic evaluations:

They know which approach to use (1) to respond to a given demand for evaluation, and (2) which methods to apply to evaluate a given set of interventions.

The lecture starts with a general introduction into the needs for and perspectives of economic evaluation, discusses the place of evaluation in the “project cycle” and addresses some general challenges to economic evaluation. It then presents different perspectives of economic evaluation and shows approaches which are appropriate to reflect these perspectives

Chapter 1: Introduction

Chapter 2: Financial evaluation of private investments: The firm’s perspective

Chapter 3: Economic valuation of public interventions: The society’s perspective

Proofs of academic achievement: Presentations and Oral Exams

DEVELOPMENT ECONOMICS

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Lecture & Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Wilhelm Löwenstein

Requirements: Admission to doctoral studies

Room **Day, Time** **Begin**
 for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)

Course description:

Participants will become familiar with up-to-date modelling approaches from the field of Development Economics, both from a theoretical and empirical perspective.

Proofs of academic achievement: Paper (70%) & oral presentation & discussion (30%)

ENVIRONMENTAL AND RESOURCE ECONOMICS

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Lecture & Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Helmut Karl

Requirements: Admission to doctoral studies

Room **Day, Time** **Begin**
 for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)

Course description:

The course is aimed at familiarizing participants with basic models of Environmental and Resource Economics:

- Approaches of welfare economics and institutional economics to determine rational use of the absorption capacity of the environment

- Market failure, political failure and instruments of environmental policy
- Optimal use of resources

Proofs of academic achievement: Oral presentation

ECONOMIC REFORM, INCOME AND POVERTY

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Lecture & Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Dieter Bender

Requirements: Admission to Doctoral Studies

Room	Day, Time	Begin
for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)		

Course description:

Based on approaches of growth theory participants will be able to analyse impacts of domestic and international reforms on growth and poverty. They will get familiar with the concepts of the “Washington-Consensus” and its critics and will discuss case studies of successful as well as failed reform policies.

Proofs of academic achievement: Paper & oral presentation

EMPIRICAL METHODS AND STATISTICAL ANALYSIS I

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Lecture & Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Werner Voss

Requirements: Admission to Doctoral Studies

Room **Day, Time** **Begin**
for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)

Course description:

Participants will get familiar with major methods of empirical research and advanced methods of statistical analyses.

They will work with the statistical package SPSS to analyse data sets.

Proofs of academic achievement: Paper & oral presentation

RESEARCH METHODS

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Dr. Katja Bender

Requirements: Admission to Doctoral Studies

Room **Day, Time** **Begin**
for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)

Course description:

Institute of Development Research and Development Policy

Proofs of academic achievement: Oral presentation

ACADEMIC PAPER WRITING II

Language: English

Department: Institute of Development Research and Development Policy

Degree programme: PhD

Module: n.s.

Course type: Seminar

Credit Points: 8 (3 semester course)

Teacher/Lecturer: Dr. Katja Bender

Requirements: Admission to Doctoral Studies and successful completion of Academic Paper Writing I

Room

Day, Time

Begin

for further information please contact Dr. Katja Bender (Katja.Bender@rub.de)

Course description:

Participants will become familiar with the requirements of writing an academic paper. Supported by teaching modules participants have to individually prepare an academic paper.

Proofs of academic achievement: Oral presentation and paper

FACULTY OF ECONOMICS

<http://www.wiwi.ruhr-uni-bochum.de>

Contact:

Name: Michele Lorraine de Groot
 Room: GC 3/156
 Tel: 0234/32-22687
 Email: Michele.deGroot@rub.de
 Consultation hours: n.s.

ALLOCATION

Language: English

Department: Chair for Applied Microeconomics

Degree programme: Bachelor of Management and Economics

Module: n.s.

This module is taught entirely in English

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

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. Robledo

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

Room	Day, Time	Begin
HZO 70	Thursday 16.00-18.00	
	Friday 12.00-14.00	

Course description:

The course gives an overview of the expenditure side of public economics at a final year undergraduate level. Proposed topics:

Pareto criterion and welfare theorems

- Public goods (optimal provision, revelation mechanisms)
- Private provision of public goods
- Public provision of private goods
- Club goods and local public goods
- Externalities, Pigouvian taxation and the Coase theorem
- Common property goods
- Imperfect competition, monopoly, oligopoly
- Voting (impossibility theorem, voting rules)
- Rent seeking (social cost, lobbying)

The whole course will be in English and no knowledge of German is necessary to attend this course. The exam can be written in English or German.

Proofs of academic achievement: Written examination

APPLIED COMPETITION POLICY

Language: English

Department: Chair of Competition Policy

Degree programme: Bachelor

Module: Competition Policy

This module is taught entirely in English

Course type: Lecture

Credit Points: 10 (Module)

Teacher/Lecturer: Professor Haisken-DeNew

Requirements: Knowledge of microeconomics is required

Room	Day, Time	Begin
HZO 100	Tuesday 10 – 12	05/04/2011

Course description:

Different aspects of competition theory and policy will be taught using empirical studies. Focus lies on empirical economic papers and case studies to gain knowledge and in-sights to practical work and empirics of antitrust and competition policy

Proofs of academic achievement: Written Exam

COMPETITION POLICY

Language: English

Department: Chair of Competition Policy

Degree programme: Bachelor of Management and Economics

Module: n.s.

This module is taught entirely in English

Course type: Lecture

Credit Points: 10 (ECTS)

Teacher/Lecturer: Professor Haisken-DeNew

Requirements: Knowledge of microeconomics is required

Room	Day, Time	Begin
HZO 100	Wednesday 08.00-10.00	
HZO 90	Thursday 14.00-16.00	

Course description:

The module „Competition Policy“ gives basic insights into the field of antitrust and competition policy in a global context. Using principles from industrial economics the economic impacts of cartels, joint-ventures, mergers, vertical contracts, price discrimination and so on are analyzed. We focus on actual research and real world examples. Therefore the literature is partly based on

primary literature like empirical papers and case studies.

Proofs of academic achievement: Written examination

COMPETITION POLICY

Language: English

Department: Chair of Competition Theory and Policy

Degree programme: Bachelor

Module: Competition Policy

This module is taught entirely in English

Course type: Lecture

Credit Points: 10 (Module)

Teacher/Lecturer: Professor Haisken-DeNew

Requirements: Knowledge of microeconomics is required

Room	Day, Time	Begin
HZO 60	Wednesday 10 - 12	06/04/2011

Course description:

Aim of this course is the understanding of basic economic principles of antitrust- and competition policy, under both a theoretical and a practical view.

Proofs of academic achievement: Written Exam

MARKETING MANAGEMENT

Language: English

Department: Chair of the Marketing Department

Degree programme: Bachelor of Management and Economics

Module: n.s.

This module is taught entirely in English

Course type: Lecture (3h) and tutorial (3h)

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. Wieseke, Jun.-Prof. Dr. Kraus

Requirements: Knowledge of the modules „Statistik I“, „Statistik II“ and „Einführung in die Betriebswirtschaftslehre“

Room	Day, Time	Begin
HGB 10	Mon 08.00-10.00 Wed	n.s.
HZO 40	14.00-18.00	

Course description: n.s.

Proofs of academic achievement: Written examination

MARKETING MANAGEMENT

Language: English

Department: Marketing Department

Degree programme: Bachelor

Module: Marketing Management

This module is taught entirely in English

Course type: Lecture and Exercise

Credit Points: 10 ECTS

Teacher/Lecturer: Prof. Dr. David Woisetschläger

Requirements: none

Room	Day, Time	Begin
HGB 10	Monday 08.00 – 10.00	04/04/2011
HZO 40	Wednesday 14.00 -18.00	

Course description:

The goals of international companies are often not only value oriented, but also market and customer oriented. To achieve these goals is the purpose of marketing. The decisions which lead to a market orientated management will be discussed. As lots of analyses in companies are usually conducted with statistical methods nowadays, these will also be content of the course.

Proofs of academic achievement: written examination

BEHAVIORAL MACROECONOMICS

Language: English

Department: Chair for Macroeconomics

Degree programme: Master of Management and Economics / Master of Economics

Module: n.s.

This module is taught entirely in English

Course type: Lecture (2h)

Credit Points: 5 ECTS

Teacher/Lecturer: Prof. Dr. Roos

Requirements: good command of English, successful conclusion of the module „Advanced Macroeconomics“

Room	Day, Time	Begin
GC 02/120	Friday 08.30-12.00	15.04.-27.05.2011

Course description:

Modern mainstream macroeconomics has solid microfoundations. In order to derive macroeconomic outcomes from individual behaviour, researchers often make restrictive simplifying assumptions such as homogeneity of agents, strict rationality, optimal learning, and irrelevance of affects. The resulting macroeconomic models may have little empirical relevance and fail to explain important phenomena such as persistent poverty and major economic crises. We examine the effects of such unrealistic assumptions and discuss problems of mainstream macroeconomic models. We also investigate how macroeconomics can benefit from other disciplines such as sociology and psychology. You also learn how methods from behavioral economics such as experiments or simulations can be applied to macroeconomic topics.

Proofs of academic achievement: Written examination

DEFENCE ECONOMICS

Language: English

Department: Chair for Microeconomics

Degree programme: Master of Management and Economics / Master of Economics

Module: n.s.

This module is taught entirely in English

Course type: Lecture (2h)

Credit Points: 5 ECTS

Teacher/Lecturer: Prof. Dr. Schimmelpfennig

Requirements: Knowledge of the module Advanced Microeconomics

Room	Day, Time	Begin
HGC 50	Monday 14.00-16.00	n. s.

Course description:

- Demand for Military Expenditure
- Deterrence
- War (Games)
- Military Pay
- Independent versus Joint Forces
- Military Procurement I: Quantity versus Quality
- Industrial Organization of Defence Industries
- Military Procurement II: Specifications and Prototypes

- Competitiveness of Aerospace Industries
- Naval Shipbuilding and Warfare
- Arms Trade
- Insurrections and Revolutions
- Guerrilla Warfare
- International Terrorism

Proofs of academic achievement: Written examination

ECONOMIC REFORMS, INCOME AND POVERTY

Language: English

Department: Economics

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

Module: Economic reforms, income and poverty

This module is taught entirely in English

Course type: Seminar

Credit Points: 5

Teacher/Lecturer: Prof. Busse

Requirements: prior knowledge in development economics

Room	Day, Time	Begin
GBCF 04/411	Tuesday, 2-4 pm	05.04.2011

Course description:

By enrolling in this course, students can learn theoretical concepts underlying the impacts of economic reform. The course will focus on key elements of economic reform pro-grams, for example, programs implemented in the context of PRS (Poverty Reduction Strategy) or trade reforms from a theoretical and empirical point of view. Also, students will hone their skills to assess problems of implementation and evaluate economic reform programs.

By the end of the course, students are able to discuss eco-nomic reform programs and their income and poverty effects by applying the acquired theoretical knowledge.

Proofs of academic achievement: seminar paper and presentation

INTERNATIONAL TRADE

Language: English

Department: Economics

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

Module: International trade

This module is taught entirely in English

Course type: Lecture and tutorial

Credit Points: 5

Teacher/Lecturer: Prof. Busse

Requirements: none

Room	Day, Time	Begin
HGC 50	Monday, 4-6 pm	04.04.2011

Course description:

This course provides an advanced study of international trade theory and policy. We will discuss aspects of international trade at a fairly abstract and rigorous level. The issues that will be addressed are, among others, the fundamental gains from trade, the implications of imperfect competition for trade patterns and welfare, how firms of different sizes and productivities engage in trade and investment, and justifications for policies that restrict trade. Also covered are real-world areas of international trade, including trade institutions as well as regional and bilateral trade agreements.

The course has three main goals:

1. To develop a solid grounding in the analytical work of modern trade theory
2. To master some tools for use in practical trade analysis
3. To provide a better understanding of the circumstances within which international trade policy is provided.

Proofs of academic achievement: exam

This course is especially suitable for exchange students.

INTRODUCTION TO INTERNATIONAL TAXATION

Language: English

Department: Lehrstuhl für Betriebswirtschaftliche Steuerlehre

Degree programme: Master

Module: Introduction to International Taxation

This module is just partly taught in English

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Dr. Achim Roeder

Requirements: BSc-Modul „Unternehmensbesteuerung I“

Room	Day, Time	Begin
GC 03/42	Thursday 08.00-10.00	07/04/2011

Course description:

The study module Introduction to International Taxation deals with tax aspects of cross-border activities of German resident taxpayers in foreign countries and non-resident taxpayers in Germany. In this course, attention is especially given to unilateral and bilateral regulations which shall prevent double taxation and regulations which shall secure the national taxation right. Therefore emphasis is given to double taxation treaties and the German Foreign Tax Act (AStG). Based on this knowledge the influence of taxation on the structure of foreign investments (location, legal form, financing) is taken into consideration.

Proofs of academic achievement: written examination

INTRODUCTION TO INTERNATIONAL TAXATION

Language: German

Department: Lehrstuhl für Betriebswirtschaftliche Steuerlehre

Degree programme: Master

Module: Introduction to International Taxation

This module is just partly taught in English

Course type: Tutorial

Credit Points: 5

Teacher/Lecturer: Dirk Langkau

Requirements: BSc-Modul „Unternehmensbesteuerung I“

Room	Day, Time	Begin
GC 02/120	Wednesday 8.00-10.00	13/04/2011

Course description:

The tutorial serves the repetition of particular contents of the lecture in German language. The study module Introduction to International Taxation deals with tax aspects of cross-border activities of German resident taxpayers in foreign countries and non-resident taxpayers in Germany. In this course, attention is especially given to unilateral and bilateral regulations which shall prevent double taxation and regulations which shall secure the national taxation right. Therefore emphasis is given to double taxation treaties and the German Foreign Tax Act (AStG). Based on this knowledge the influence of taxation on the structure of foreign investments (location, legal form, financing) is taken into consideration.

Proofs of academic achievement: written examination

INNOVATIONSMANAGEMENT

Language: English

Department: Junior-Professorship for Management and Innovation

Degree programme: Master of Management and Economics / Master of Management

Module: n.s.

This module is taught entirely in English

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

Credit Points: 10 ECTS

Teacher/Lecturer: Jun.-Prof. Dr. Salge

Requirements: Basic knowledge of statistics is assumed

Room	Day, Time	Begin
GC 03/42	Tuesday 12.00-14.00	n.s.
	Tuesday 16.00-18.00	

Course description:

This event is an introduction to Innovation Management. It involves looking at the entire process from the inception of an idea to its successful implementation. Innovation with regard to products, services and processes are distinguished here, as are open and closed innovation procedures. This will take place against the background of an in-depth discussion of the significance of national, regional and sectoral innovation systems. The event will enable students to acquire important theoretical foundations and introduces tools for successful innovation management. Moreover, students will gain first insights into empirical innovation research and discuss concrete problems that stem from the organizational practice of innovation management.

Proofs of academic achievement: Written exam (50%), case study (50%)

LABOR ECONOMICS

Language: English

Department: Chair for Empirical Economics

Degree programme: Master

Module: Labor Economics

This module is taught entirely in English

Course type: Lecture and Tutorial

Credit Points: 5

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

Requirements: Bachelor Degree in Economics. We recommend to have microeconomic basics and to participate in the module Applied Economics in advance.

Room	Day, Time	Begin
HBC 50 / HZO 60	Wednesday 10.15-11.45 / 18:00-18:45	13/04/2011

Course description:

The labor market affects the daily lives and the welfare of every individual directly. Hence, the analysis of labor markets is of importance and interest not only to economists but also to the population is large. Labor economics is a very challenging and a stimulating area in economics

due to the special characteristics of the labor market. For example, different to capital workers are not commodities with fixed characteristics and make decisions about the nature of their participation in the labor market. Institutions affect the labor market much more than any other market.

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

Proofs of academic achievement: written examination

RISK MANAGEMENT AND REGULATION

Language: English

Department: Department of Economics

Degree programme: Master

Module: Banking and finance 3

This module is taught entirely in English

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Dr. André Uhde

Requirements: Previous knowldege in banking and finance

Room	Day, Time	Begin
GC03/46	Tuesday, 12.00-14.00	n.s.

Course description:

Selected topics in financial risk management; financial intermediation theories; banking regulation.

Proofs of academic achievement: written examination

THEORY OF PRODUCTION

Language: English

Department: Lehrstuhl für Produktionswirtschaft

Degree programme: Master of Management, Master of Economics, Master of Mangement and Economics

Module: Theory of Production

This module is taught entirely in English

Course type: Lecture

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Marion Steven

Requirements: Bachelors Degree in Management and Economics

Room	Day, Time	Begin
GC 4/58	Thursday 12.00 (first meeting)	07/04/2011

Course description:

The course will be taught as a block course, time and location will be discussed during the first meeting.

The theory of production deals from a theoretical point of view with fundamental relations of economic transformation processes and thus forms a basis for production decisions. The most important models of the theory of production will be presented with a focus on their relations and fundamental mechanisms. Main ideas are the dynamics of production, the integration of environmental aspects and the relations of the theory of production and production management.

A sound knowledge of mathematical methods is required.

Proofs of academic achievement: written examination

WELFARE ECONOMICS - LECTURE

Language: English

Department: Chair of Competition Policy

Degree programme: Master

Module: Welfare Economics

This module is taught entirely in English

Course type: Lecture

Credit Points: 10 (Module)

Teacher/Lecturer: Professor Haisken-DeNew

Requirements: Knowledge of economic research methods

Room	Day, Time	Begin
HGC 40	Thursday 10 - 12	06/04/2011

Course description:

Different aspects of welfare measurement, the theoretical foundations and empirical findings will be taught. The main topics are measuring poverty and the utility indicator life satisfaction. Lectures will mainly be based on recent empirical articles.

Proofs of academic achievement: Written exam (50%), case study (50%)

FACULTY OF GEOSCIENCE

www.rub.de/gmg

Contact:

Name: Thomas Fockenberg
 Room: GC 3/156
 Tel: 0234/32-24392
 Email: thomas.fockenberg@rub.de
 Consultation hours: n.s.

ANALYSIS AND INTERPRETATION - INVERSE PROBLEMS

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercises

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Wolfgang Friederich

Requirements: Generally: BSc in Geosciences or a related discipline. Specifically: candidates are required to contact the lecturer (wolfgang.friederich@rub.de) prior to admission to this course.

Room	Day, Time	Begin
n.s.	n.s.	n.s.

Course description:

Students learn general techniques of deriving earth models from observed data by solving an optimization problem with emphasis on inverse problems with inconsistent, erroneous and incomplete data.

Proofs of academic achievement: Written examination and exercises

EXPLORATION GEOPHYSICS II

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

This module is taught entirely in English

Course type: n.s.

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Jörg Renner

Requirements: none

Room	Day, Time	Begin
NA 04/591	Monday 9.00 - 9.45	04/04/11

Course description:

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

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

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

GLOBAL TECTONICS

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture

Credit Points: 3

Teacher/Lecturer: Prof. Dr. Bernhard Stöckhert

Requirements: Generally: BSc in Geosciences or a related discipline. Specifically: candidates are required to contact the lecturer (bernhard.stoeckhert@rub.de) prior to admission to this course.

Room	Day, Time	Begin
n.s.	n.s.	n.s.

Course description:

Introduction to large scale tectonics and selected problems, including kinematics of plate motion, plate boundary zones, length and time scales of deformation, properties of crust and lithosphere. Emphasis is on the integration of geological, geophysical, petrologic and geodetic concepts and information. In particular, a solid background in geophysics and petrology (on the Bachelor level at minimum) is prerequisite.

Proofs of academic achievement: Written examination

LOW-TEMPERATURE THERMOCHRONOMETRY

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercise

Credit Points: 3

Teacher/Lecturer: Dr. Manfred Brix

Requirements: BSC in Geosciences or a related discipline

Room	Day, Time	Begin
n.s.	n.s.	n.s.

Course description:

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

Proofs of academic achievement: Written examination

MARINE MICROPALAEONTOLOGY 1

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercises; 3 hours /week

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Joerg Mutterlose

Requirements: BSc in Geosciences or Biology. A pre-requisite for this course is that the students have successfully attended basic courses in palaeontology or biology, stratigraphy and sedimentology

Room	Day, Time	Begin
NA 04/597	Thursday 10.15 - 13.45	07/04/2011

Course description:

The course covers the principles of marine micropalaeontology, introducing the most important groups of microfossils: Dinoflagellates, calcispheres, spores, pollen, calcareous nannofossils, diatoms, silicoflagellates, foraminifera, radiolarians, ostracods and conodonts. Special emphasis is paid to the palaeoecologic and oceanographic interpretations based on these groups. A second topic is the stratigraphic application in particular to oil industry related activities (bore hole dating, interpretation of sedimentary sequences etc.).

Proofs of academic achievement: Written exam at the end of the term

MARINE MICROPALAEONTOLOGY 2

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercises; field course, 3 days

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Joerg Mutterlose

Requirements: The students must have attended the course "Micropalaeontology 1" successfully.

Room	Day, Time	Begin
NA 04/597	Wednesday 10.15 - 11.45	06/04/11

Course description:

During the field course several siliciclastic sequences will be logged lithologically. Bed-by-bed samples will be taken in the field for a future analyses by the participants. After preparation for micropalaeontological studies (washing) the samples will be analysed by the students with respect for their faunal contents. The palaeoecologic and stratigraphic implications of these observations will be discussed.

Proofs of academic achievement: Oral presentation and written report at the end of the term.

ORGANIC HYDROCHEMISTRY

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercise

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Frank Wisotzky

Requirements: Knowledge about hydrogeology

Room	Day, Time	Begin
NA 1/173	Monday 10.15 – 11.45	04/04/11

Course description:

Behaviour of organic substances in aquifers, remediation

Proofs of academic achievement: Examination and handling of exercises

STRATIGRAPHY

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Field course; 3 days

Credit Points: 2

Teacher/Lecturer: Prof. Dr. Joerg Mutterlose

Requirements: The students must have attended the course "Micropalaeontology 1" successfully

Room	Day, Time	Begin
n.s.	n.s.	n.s.

Course description:

During the three day field course various outcrops exposing sediments of Triassic, Jurassic and Cretaceous age will be visited. And discussed with respect to their stratigraphy, lithology and palaeontology. Several siliciclastic sequences will be logged lithologically by each participant. Bed-by-bed samples will be taken in the field for a future analyses by the students.

Proofs of academic achievement: Written report at the end of the term

THEORETICAL GEOPHYSICS - SEISMIC WAVES

Language: English

Department: Institut für Geologie, Mineralogie und Geophysik

Degree programme: Master

Module: n.s.

Course type: Lecture and exercise

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Wolfgang Friederich

Requirements: Generally: BSc in Geosciences or a related discipline. Specifically: candidates are required to contact the lecturer (wolfgang.friederich@rub.de) prior to admission to this course. s

Room	Day, Time	Begin
n.s.	n.s.	n.s.

Course description:

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

Proofs of academic achievement: Written examination and exercises

INTERDISCIPLINARY CENTRE OF ADVANCED MATERIALS SIMULATION (ICAMS)

www.icams.de

Contact:

Name: Rebecca Janisch

Room: UHW 12/1209

Tel: 0234/32-29304

Email: Rebecca.janisch@rub.de

Consultation hours: n.s.

MICROSTRUCTURE AND MECHANICAL PROPERTIES

Language: English

Department: Micromechanical and Macroscopic Modelling; Scale Bridging Thermodynamics and Kinetic Simulation

Degree programme: Master

Module: 3b

Course type: Lecture with exercises

Credit Points: 4

Teacher/Lecturer: 6

Requirements: Master

Room	Day, Time	Begin
Prof. Dr. Gregor Schöner	Thursday, t. b. a.	14/04/11

Course description:

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

Proofs of academic achievement: Seminar

SURFACES AND INTERFACES

Language: English

Department: Micromechanical Modelling of Macroscopic Material Behaviour, Atomistic Modelling and Simulation, ICAMS

Degree programme: Master

Module: 6 - MS1

Course type: Lecture plus excercises

Credit Points: 6

Teacher/Lecturer: 6

Requirements: Master

Room	Day, Time	Begin
Prof. Dr. Gregor Schöner	Thursday, t. b. a.	07/04/10

Course description:

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

Proofs of academic achievement: Seminar

WRITING A FINITE ELEMENT PROGRAM

Language: English

Department: Micromechanical Modelling of Macroscopic Material Behaviour, ICAMS

Degree programme: Master

Module: Writing a finite element program

Course type: Lecture, including computer exercises

Credit Points: 6

Teacher/Lecturer: 6

Requirements: n.s.

Room	Day, Time	Begin
t.b.a.	t.b.a.	t.b.a.

Course description:

This course will equip participants with a fundamental understanding of FEM-Programs by guiding students to independently write their own FEM software for continuum problems. The course will cover all the necessary steps to write this software: input of mesh, evaluation and output. The abstract concept of FEM is thereby first-hand used to solve an engineering problem.

Proofs of academic achievement: written examination

MICROSTRUCTURE AND MECHANICAL PROPERTIES

Language: English

Department: Micromechanical and Macroscopic Modelling; Scale Bridging Thermodynamics and Kinetic Simulation

Degree programme: Master

Module: 3b

Course type: Lecture with exercises

Credit Points: 4

Teacher/Lecturer: 6

Requirements: Master

Room	Day, Time	Begin
Prof. Dr. Gregor Schöner	Thursday, t. b. a.	14/04/11

Course description:

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

Proofs of academic achievement: Seminar

FACULTY OF LAW

<http://www.jura.ruhr-uni-bochum.de/>

Contact:

Name: Katrin Giesen
 Room: GC08/36
 Tel: 0234/32-27681
 Email: katrin.giesen@rub.de
 Consultation hours: upon request

COMMON LAW FOR CIVIL LAWYERS

Language: English

Department: Dean of the Faculty of Law
Degree programme: Staatsexamen, Master LLM
Course type: Lecture/workshop
Credit Points: 3
Teacher/Lecturer: Katrin Giesen
Requirements: English proficiency

Room	Day, Time	Begin
GC8/38	13.06.2011 to 17.08 2011, 10:00 to 16:00, 20.06.2011 10:00 to 12:00	13.06.2011

Course description:

It is the main objective of the course to provide students with an overview of those areas of common law which they are most likely to encounter in private practice. They will be familiarised with the terminology and doctrines of tort law and contract law, and encouraged to apply knowledge to factual situations.

Proofs of academic achievement: written exam on 16.06.2011, short problem question assignment

This course is especially suitable for exchange students.

PLAIN ENGLISH FOR LAWYERS

Language: English

Department: Dean of the Faculty of Law
Degree programme: Staatsexamen, Master LLM
Course type: Lecture/workshop
Credit Points: 3
Teacher/Lecturer: Katrin Giesen

Requirements: English proficiency

Room	Day, Time	Begin
GC 8/38	Thursday, 12.00 - 14.00	14.04.2011
And: GC 8/38(15.04 & 20.05 GC7/31	Fridays, 12.00 -14.00	15.04.2011
And: GC 8/38	Thursdays, 10.00 - 12.00	14.04.2011

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 mootings). 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.

FACULTY OF MATHEMATICS

<http://www.ruhr-uni-bochum.de/ffm/>

Contact:

Name: Dr. Mario Lipinski

Room: NA 2/68

Tel: 0234/32-23246

Email: Studienberatung-Mathe@RUB.de

Consultation hours: t. b. a.

NUMERICAL METHODS AND STOCHASTICS

Language: English

Department: Mathematics

Degree programme: Master Course Computational Engineering

Module: Numerical Methods and Stochastics

This module is taught entirely in English

Course type: Lecture series

Credit Points: 6

Teacher/Lecturer: Proff. H. Dehling and R. Verfürth

Requirements: Knowledge of Analysis, Numerics and Stochastics on the level of a bachelor in engineering science

Room	Day, Time	Begin
t. b. a.	Mon. 15:15-16:45 Wed. 12:30-14:00	April, 4 th

Course description:

Numerics:

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

Stochastics:

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

Proofs of academic achievement: 2 hours written exam

MEDICAL FACULTY

INST. PHYSIOLOGY

<http://www.ruhr-uni-bochum.de/lmr/>

Contact:

Name: Prof. Dr. Denise Manahan-Vaughan

Room: MA 4/149

Tel: 0234/32-22042

Email: lmr@rub.de

Consultation hours: on demand

STRUCTURE, FUNCTION & PLASTICITY OF THE CENTRAL NERVOUS SYSTEM

Language: English

Department: Neurophysiology

Degree programme: Medical Doctor (MD) / PhD Neuroscience / ext. Course Neurophysiology for Students of Physics

Module: n.s.

This module is taught entirely in English

Course type: Seminar / Journal Club

Credit Points: 2

Teacher/Lecturer: Dr. Hardy Hagen, Dr Michael Fährmann, Dr Verena Aliane, Dr. Gleb Barmashenko, Prof. Klaus Funke

Requirements: Advanced registration for the course (deadline March 23rd 2011); Regular and active participation throughout the semester; Preparation for the course (reading, in advance, of the journal to be presented by the other course participants, preparation of questions); Presentation by the participant of a journal within the topic of the course.

Room	Day, Time	Begin
FNO 01/117	Wednesday 16:30	06/04/2011

Course description:

Analytical discussion of recent publications in the field related to the course title. Active presentation of a journal (at least one journal per participant per semester), discussion of research approaches and the state-of-the-art in the area of neuroscience.

Proofs of academic achievement: Certificate for MD, PhD students / Oral Exam and certificate for Students of Physics

This course is credited for "Optionalbereich".

DEPARTMENT OF NEUROLOGY, ST. JOSEF HOSPITAL:

<http://neurologie.klinikum-bochum.de>

Contact:

Prof. Dr. Ralf Gold, PD Dr. Andrew Chan
office
Tel: 0234 / 509-2411
Email: peter.h.kraus@ruhr-uni-bochum.de
Consultation hours: date by arrangement

SEMINAR: NEUROIMMUNOLOGY

Teacher/Lecturer: Prof. Dr. Ralf Gold, PD Dr. Andrew Chan, plus invited lecturers

Room	Day, Time	Begin
Lecture room 6, "Hörsaalzentrum"	Thursday, 17:00-18:00	April, 2011

Course description:

The seminar will cover topics in the field of neuroimmunology including presentation of current clinical and laboratory research as well as therapy updates.

(details will be announced: <http://neurologie.klinikum-bochum.de/fortbildung.shtml>)

LECTURE: NEURODEGENERATION

Teacher/Lecturer: PD Dr. Peter H. Kraus, PD Dr. Dirk Woitalla, PD Dr. Carsten Saft, PD Dr. Siefried Muhlack

Room	Day, Time	Begin
Lecture room 2, "Hörsaalzentrum"	to be announced	april, 2011

Course description:

The lecture will introduce into principles of neurodegeneration and present clinical pictures induced by neurodegenerative processes. Clinical main topics will be Parkinson's disease, Huntingtons Disease and Dementia.

(details will be announced: <http://neurologie.klinikum-bochum.de/fortbildung.shtml>)

INSTITUT OF ANATOMIE

<http://www.ruhr-uni-bochum.de/anat1>

Contact:

Name: Prof. B. Brand-Saber

Room: MA Süd 05/158

Tel: 0234/32-25213

Email: Beate.Brand-Saberi@rub.de

Consultation hours: after prior consultation

200134

Language: English

Department: Anatomy and Molecular Embryology

Degree programme: n. s.

Module: Developmental Stem Cell Biology

Course type: Lecture

Credit Points: up to 5

Teacher/Lecturer: Brand-Saberi, Hofmann, Mannherz

Requirements: none

Room	Day, Time	Begin
MA 5/62	Tuesday, 09:15-11:15	-

Course description:

The lecture series focuses on aspects of mammalian reproductive biology and embryology and gives an overview of stem cell principles nomenclature, systematics and current usage in medical contexts.

Proofs of academic achievement: multiple choice

This course is credited for “Optionalbereich”

INSTITUTE FOR NEUROINFORMATICS

www.ini.rub.de

Contact:

Name: Kathleen Schmidt

Room: NB 3/32

Tel: 0234/32-28998

Email: Kathleen.Schmidt@ini.rub.de

Consultation hours: 8:00 - 13:00 h

MATHEMATICS FOR MODELING AND DATA ANALYSIS

Language: English

Department: Angewandte Informatik/Institut für Neuroinformatik

Degree programme: Bachelor

Module: Mathematics for modeling and data analysis

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: basic knowledge of linear algebra and calculus

Room	Day, Time	Begin
NC 02/99	Thursday, 12.15-13.45	07.04.2011 (Lecture)
NB 3/57	Thursday, 10.30-12.00	14.04.2011 (Tutorial)

Course description:

This course covers mathematical methods that are relevant for modeling and data analysis. Particular emphasis will be put on an intuitive understanding as is required for a creative command of mathematics. The following topics will be covered: functions, qualitative analysis of nonlinear differential equations, Bayes theory, multiple integrals.

Proofs of academic achievement: written examination

AUTONOMOUS ROBOTICS: ACTION, PERCEPTION AND COGNITION

Language: English

Department: Angewandte Informatik/Institut für Neuroinformatik

Degree programme: Master

Module: Autonomous robotics: action, perception and cognition

This module is taught entirely in English

Course type: Lecture + Tutorial

Credit Points: 5

Teacher/Lecturer: Prof. Dr. Gregor Schöner

Requirements: none

Room	Day, Time	Begin
NB 3/57	Thursday, 14.15-16.00	07.04.2011 (Lecture)
NB 3/57	Thursday, 16.15-17.00	07.04.2011 (Tutorial)

Course description:

Neuroinformatics is concerned with the discovery of new solutions to technical problems of information processing. These solutions are sought based on analogies with nervous systems and the behavior of organisms. This course focusses on three exemplary problems to illustrate this approach:

- a) Artificial action (autonomous robotics)
- b) Artificial perception (robot vision)
- c) Artificial cognition (simplest cognitive capabilities of autonomous robots such as decision making, memory, behavioral organization)

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

Proofs of academic achievement: written examination

COMPUTATIONAL NEUROSCIENCE: VISION AND MEMORY

Language: English

Department: Angewandte Informatik/Institut für Neuroinformatik

Degree programme: Master

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: The mathematical level of the course is mixed. There are some lectures that require almost no math and others that require a lot. The tutorial is almost entirely mathematical. 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, 12.15-13.45	05.04.2011 (Lecture)
NB 3/57	Tuesday, 10.30-12.00	12.04.2011 (Tutorial)

Course description:

This computational neuroscience course covers models and theoretical concepts of vision and memory, such as visual receptive fields, neural map formation, visual invariances, attention, and associative memories.

Proofs of academic achievement: written examination

FACULTY OF PHILOLOGY

ENGLISH DEPARTMENT

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

Contact:

Room: GB 6/133

Tel: 0234/32 - 22589

Email: anglistik@rub.de

Consultation hours: Monday – Friday: 9 – 13 pm

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 in the departmental university calendar:

http://www.ruhr-uni-bochum.de/anglistik/courses/index_courses.htm

FACULTY OF PHILOSOPHY AND EDUCATION

PHILOSOPHY DEPARTMENT

<http://www.ruhr-uni-bochum.de/philosophy>

Contact:

Name: Dr. Michael Flacke
 Room: GA 3/142
 Tel: 0234/32-22725
 Email: philosophy@rub.de
 Consultation hours: Wed 14-16

Prof. Dr. Albert Newen
 GA 3/152
 0234/32-22139
sekretariat-newen@rub.de
 by appointment

ADVANCED TOPICS IN THE PHILOSOPHY OF LANGUAGE: THE SEMANTICS AND PRAGMATICS OF QUOTATION

Language: English

Department: Philosophy Department

Degree programme: Master

Module: n.s.

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Prof. Dr. Markus Werning

Requirements: none

Room	Day, Time	Begin
GA 04/187	August 22-30, 2011/ 10-18	Monday, August 22, 2011

Course description:

At first glance quotation marks are an inconspicuous syntactical means to refer to expressions of a language within the language. From the point of view of philosophy of language and philosophical semantics, there are however few syntactical constructions that raise more intricate problems. Quotation is a means of self-reference. It is part and parcel of Tarski's recursive definition of truth and the key to many philosophical paradoxes. Quotation marks create logically opaque contexts. Its semantic analysis seems to conflict with widely accepted principles of semantics such as the principle of compositionality. This is one of the reasons why quotation has moved into the focus of attention in the philosophy of language recently again. In the seminar we will first describe various contexts in which quotation marks may occur. We will then study important recent contributions to the problem in philosophy and linguistics and aim at formulating new problem solving strategies.

The seminar is part of the program "Forschendes Lehren". The seminar will take place in conjunction with the international workshop "The Semantics and Pragmatics of Quotation" that will take place in Bochum 26-30 September 2011 as part of the conference "Semantics and Philosophy in Europe IV". A central part of the seminar will be a tutorial taught by an internationally renowned expert.

Students will be expected to take over a presentation. All texts and discussions will be in English. A reader will be provided. Students interested are asked to get in touch with Professor Werning at the beginning of the summer semester. Updates will be available on the internet.

Preparatory readings:

Cappelen, H. & Lepore, E. *Language Turned on Itself: The Semantics and Pragmatics of Metalinguistic Discourse*. Oxford, 2007: Oxford University Press..

Proofs of academic achievement: n.s.

KNOWLEDGE AND ITS LIMITS

Language: English

Department: Philosophy Department

Degree programme: Master

Module: n.s.

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dipl. Math. Caroline Semmling

Requirements: For the discussions basic knowledge in epistemology is required. Aquirements in modal logic and philosophy of mind are desirable.

Room	Day, Time	Begin
GABF 04/358	Wednesday 10-12	April 6, 2011

Course description:

The seminar is dedicated to one of the most surprising and pioneering works in modern epistemology. Timothy Williamson presents an approach to knowledge which constitutes knowledge as a genuine factive mental states which is prime and not a conjunction of purely external and internal factors. Thereby, he challenges the definition of knowledge as a justified true belief that goes back to Plato, and offers an innovative approach as an alternative to common conceptions in modern epistemology.

In the seminar we will read chapters of Williamsons book *Knowledge and its Limits*, one by one. We reconstruct and discuss his arguments. The participants should have the book *Knowledge and its Limits* on hand.

Literature: T. Williamson, *Knowledge and its Limits*, Oxford University Press 2000.

Proofs of academic achievement: Presentation

PHILOSOPHY OF EMOTIONS

Language: English

Department: Philosophy Department

Degree programme: Master

Module: n.s.

This module is taught entirely in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dr. Leon de Bruin

Requirements: Knowledge in philosophy of cognition.

Room	Day, Time	Begin
GABF 04/714	Wednesday, 12-14	April 6, 2011

Course description:

What is an emotion? In particular, is there something useful that all emotions share in common, or is our folk concept of emotion deeply flawed in that it comprises very different things? In his book 'What emotions really are', Paul Griffiths explores these questions in an interdisciplinary way, investigating approaches from the philosophy of science and from several fields of science themselves, notably anthropology and (evolutionary) psychology.

In this course, we follow Griffiths in his discussion of contemporary models of emotion and his analysis of their deficiencies. We also scrutinize Griffiths own attempt to construct a basis for future models that pay equal attention to biological fact and conceptual rigor. In addition to Griffiths' book, we read several articles about philosophical conceptualizations of emotion and the study of emotion within the afore-mentioned scientific disciplines. Here we also focus to some extent on the question how we recognize and understand our own emotions and those of others.

Literature:

Griffiths, P. E. 1997. *What Emotions Really Are: The Problem of Psychological Categories*. University of Chicago Press.

Selected Articles (final selection will be available on Blackboard for registered participants):

Adolphs, R. 2003. Cognitive Neuroscience of Human Social Behavior. *Nature Reviews Neuroscience* 4, 165-178.

Baier, A. 1990. What Emotions Are About, *Philosophical Perspectives*, 4, 1-29.

Cosmides, L. & Tooby, J. 2000. Evolutionary Psychology and the Emotions, in *Handbook of Emotions*, Michael Lewis and Jeannette M. Haviland-Jones, 91-115. New York: Guilford Press.

Goldie, P. 2003. Emotion, Feeling, and Knowledge of the World, in *Thinking About Feeling: Contemporary Philosophers on Emotions*, ed. Robert C. Solomon. Oxford, New York: Oxford University Press

Griffiths, P. E. 2004. Emotions as natural and normative kinds, *Philosophy of Science*, 71(5s), 901-911

James, W. 1884. What is an Emotion?, *Mind*, 9, 188-205.

LeDoux, J.E. 2000 Emotion circuits in the brain, *Annual Review Neuroscience*, 23, 155-184

Jesse J. Prinz (2004). Which Emotions Are Basic? In D. Evans & Pierre Cruse (eds.), *Emotion, Evolution and Rationality*. Oxford University Press.

Rorty, A. 2003. Enough Already with Theories of Emotion, in *Thinking About Feelings: Philosophers on Emotions*, ed. Robert C. Solomon. Oxford, New York: Oxford University Press.

Proofs of academic achievement: The 'unbenoteter Schein' is based on a presentation and a written summary. The 'benoteter Schein' is based on a presentation in combination with a final paper.

THE PHILOSOPHY OF FATE: GOD, NATURE AND LOGIC

Language: English

Department: Philosophy Department

Degree programme: Master

Module: n.s.

This module is taught entirely in English

Course type: Seminar

Credit Points: 6

Teacher/Lecturer: Dr. Greg Sax

Requirements: none

Room	Day, Time	Begin
GABF 04/358	Wednesday, 12-14	May 4, 2011

Course description:

According to the thesis of fatalism: (I) all future human acts are already (and always were) inevitable and unpreventable; (II) consequently, none will be performed freely.

(For an entertaining presentation, see:

<http://vids.myspace.com/index.cfm?fuseaction=vids.individual&VideoID=9135903> .)

Fatalism has been the subject of perpetual and lively discussion since Aristotle first raised the issue. Arguments on the basis of causal determinism and divine omniscience have dominated the history of the dispute, and they remain interesting and worth pursuing despite the fact that these theses are no longer as uncontroversial as they once were. However, the most fascinating fatalistic arguments rest on less controversial considerations like the principle of bivalence and the correspondence theory of truth.

As these remarks indicate, the surprisingly wide range of the fatalist discussion includes (among much else) the natures of truth, necessity and contingency, freedom and moral responsibility, time and the future, and eternity and divinity; the truth of the bivalence principle and 3-valued logic; and the possibility of knowledge of the future.

The seminar will be conducted in English. Since this class will not start before the first week of May, we will meet once for an extended seminar on a Saturday (Wochenendseminar).

Proofs of academic achievement: Presentation

INSTITUTE OF EDUCATIONAL SCIENCE

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

Contact:

Name: Dr. Ute Lange

Room: GA 1/133

Tel: 0234/32-24982

Email: ute.lange@rub.de

Consultation hours: Tue and Thu: 4 - 6 pm

EDUCATIONAL DEVELOPMENTS IN COMPARATIVE PERSPECTIVES

Language: English

Department: Comparative Education

Degree programme: Bachelor of Arts/Master of Education

Module: A 5.: Internationale Bildungsentwicklung und interkulturelle Pädagogik

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Prof. Dr. Christel Adick

Requirements: Basic knowledge in Educational Sciences

Room	Day, Time	Begin
n.s.	Monday, 14.15 - 15.45	04.04.2011

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.

For this sake, the seminar will be based on: (a) texts compiled in a reader, which will be distributed at the beginning of the course, and (b) internet-based research conducted individually, and in tandems or groups on the Education For All (EFA) Programme of the United Nations Educational, Scientific and Cultural Organisation (UNESCO).

Accordingly, participants will have to work on the following two assignments for their proof of academic achievement ('Kleine Studienleistung'/4 CP):

In the first part some internationally debated issues will be discussed, e.g. peace education, discrimination in education in the European Union, the importance of information & communication technology (ICT) in national education systems, international research on gender roles in text-books, etc. Participants are asked to write and present a summary of one of these articles which are compiled in the reader, also distributing their summary (3-5 pp.) in class.

In the second part of the course the websites of the UNESCO will be screened for general information on EFA, definitions of empirical indicators (e.g. Gender Parity Index) and available data on educational enrolments in practically all the countries of the world. Participants are asked to choose one country each and write a country profile using the data of the yearly Global Monitoring Reports (available online and also in print in the library of the Institute of Education). The individual country profiles will be discussed and compared in tandems or groups which are formed according to world regions (e.g. Latin America, South East Asia, etc.) in order to prepare a presentation for plenary discussion. Participants will have to decide at the beginning of the course

if they want to prepare the reports of their country profiles and group work individually or collectively for assessment.

The assignments may be written and presented either in English or in German.

Proofs of academic achievement: see above

HOW TO CREATE COMPUTER-BASED LEARNING MATERIALS: PRINCIPLES AND PRACTICES (BLOCK COURSE)

Language: English

Department: Research on learning and instruction

Degree programme: Bachelor of Arts / Master of Education

Module: A 6:Lernen und Lehren

Course type: Seminar

Credit Points: 4

Teacher/Lecturer: Martina Rau

Requirements: Basic knowledge in Educational Sciences

Day, Time, Room

Sat 07.05.2011, 14.00-18.00, GA 03/42

Sat 14.05.2011, 10.00-18.00, GA 2/41

Sun 15.05.2011, 10.00-18.00, GA 2/41

Sat 28.05.2011, 10.00-18.00, GA 2/41

Sun 29.05.2011, 10.00-18.00, GA 2/41

Begin

07/05/2011

Course description:

Computer-based learning systems are becoming more and more prevalent. Their effectiveness, however, depends largely on their design. In this practice oriented seminar, you will learn about theoretical and methodological principles to guide the design of effective computer-based learning environments. You will apply these principles as you in small groups to create an interactive learning system for a domain of your choice. Specifically, you will learn how to build a type of intelligent tutoring system: cognitive tutors. These are learning systems that respond adaptively to students' actions by providing hints and error feedback that are designed to remedy misconceptions as identified by specific student errors. The seminar will take place on three weekends. On each weekend, research-based principles on computer-supported learning will be introduced and discussed, and then applied to each group's tutoring systems. Topics covered include the use of text and graphics, multi-media support such as interactive graphics and animations, self-explaining, worked examples, and cognitive task analysis, difficulty factors analysis, and principles of task sequencing.

Please note: The course is offered in English and addresses both international and German students. If no international students sign up, the course sessions will be held in German, but the readings will remain in English, due to organizational constraints.

Proofs of academic achievement: n. s.

FACULTY OF PHYSICS AND ASTRONOMY

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 summer semester (04/04/2011).

Details concerning exercises will be fixed during the corresponding lectures.

MASTER OF SCIENCE / DIPLOM

Course Nr	Course Title	Day, Time	Room	Language	Lecturer	Comment
160 307	Exploring Condensed Matter via x-rays and Neutrons	Thur. 08.30-10.00	NB 4/158	English or German	Zabel	
160 308	Exercise: Exploring Condensed Matter via x-rays and Neutrons	Thur 10.00-12.00,	NB 4/158	English or German	Zabel	
160 309	Nanomagnetismus	Fri. 09.00-11.00	NB 4/158	English or German	Petracic	
160 310	Exercise Nanomagnetismus	Fri. 11.00- 12.00	NB 4/158	English or German	Petracic	
160 311	Magnetism in Condensed Matter			English or German	Zabel	
160 312	Exercise Magnetism in Condensed Matter			English or German	Zabel	
160 315	Application and Implementation of Electronic Structure Methods	Fri. 10.00- 14.00	NB 7/173	English	Drautz, Neugebauer, Madsen	Lecture, teamwork & practical exercises
160 316	Quantum Mechanics in Material Science	Mon. 09.00-11.15	NB 4/158	English	Drautz	Lecture & Seminar
160 317	Interfaces and surfaces	Thur. 10.00- 14.00		English	Drautz, Janisch, Rogal Hammerschmidt	Lecture & Seminar
160 318	Stochastische Prozesse	2 hours, by appointment		English	Spatschek	
160 319	Exercise Stochastische Prozesse	1 hour, by appointment		English	Spatschek	
160 324	Seminar: "Methods of quantum field theory in solid state and high-energy physics"	Fri. 16.00-18.00	NB 6/73	English	Eremin, Polyakov	s.a. 160 425

Nuclei and particle physics

Course Nr	Course Title	Day, Time	Room	Language	Lecturer	Comment
160 406	Nukleosynthese in der Nuklearen Astrophysik	Fri. 12-14.00	NB 2/170	German or English	Ritman, Stockmanns	5 Credits
160 407	Seminar zu Nukleosynthese in der Nuklearen Astrophysik	Fri. 10-12.00	NB 2/170	German or English	Ritman, Stockmanns	
160 425	Methods of quantum field theory in solid state and high energy physics	Fr 16.00- 18.00	NB 6/73	English	Polyakov, Eremin	s.a. 160 326

Plasma and atomic physics

Course Nr.	Course Title	Day, Time	Room	Language	Lecturer	Comment
160 504	Plasma chemistry	Mon. 15.15-17.00	NB 5/158	English	Benedikt	
160 505	Exercise Plasma chemistry	Mo 17.15-18.00	NB 5/158	English	Benedikt	
160 506	Quantentheorie des Lichts II	2 hours By appointment	NB 2/170	German, English or French	Rosmey	
160 508	Production and investigation of highly charged ions	Fri. 14.15- 16.00	NB 3/99	German or English	Träbert	dates possibly compressed into fewer days, optionally in english
160 509	Plasma-Wand-Wechselwirkung in Fusionsplasmen	Tue. 12.00- 14.00,	NB 5/158	German or English	Unterberg	
160 520	European School on Low Temperature Plasma Physics: Basics and Applications			English	Winter, Böke	Dates compressed (lecture & exercise) at the physic-centre in Bad Honnef
160 521	European School on Low Temperature Plasma Physics: Master Class on hot topics			English	Winter, Böke	Dates compressed (lecture & exercise) at the physic- centre in Bad Honnef
160 526	Seminar zur Theoretischen Plasmaphysik	2 hours By appointment		English	Shukla, Eliasson	

FACULTY OF PSYCHOLOGY

<http://www.ruhr-uni-bochum.de/psy-dekanat/fak-home/>

Contact:

Name: Dr. Andreas Utsch

Room: GAFO 04/261

Tel: 0234/32-27895

Email: Andreas.Utsch@rub.de

Consultation hours: Thursday 3 - 4 p.m., Friday 10 - 12 a.m

BASIC NEURAL SIMULATION

Language: English

Department: Psychology

Degree programme: Bachelor

Module: Basic Neural Simulation

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: M. Yosida

Requirements: none

Room	Day, Time	Begin
GAFO 04/615	Tuesday 10 - 12 a.m.	n.s.

Course description:

The goal of this seminar is 1) to understand basic electrophysiological properties of neurons and 2) to learn how to implement this knowledge into a computational model of a neuron. First, students will learn basic electrophysiological properties such as the maintenance of the resting membrane potential and the generation of an action potential through lectures. Students will then build their own neuron model using a neural simulation environment called Neuron. Simulation using computers will not only help solidify the students' understanding of electrophysiological properties but also will allow them to use this knowledge in the future research. Acquiring this technique will enable students for example to estimate the consequence of a malfunction of certain ionic channel in a disease or to estimate the specific character of specific neuron types of their interest. Advanced students will have the opportunity to expand this single neuron model to a neural network model to simulate a role of a brain region of their interest.

This course will also provide necessary skills regarding computational simulation but do not require previous experience in modeling or programming. Basic knowledge about electric circuit would be of advantage.

Proofs of academic achievement: Reports (students can chose whether they'Re be graded or not).

MULTIVARIATE STATISTICS

Language: English

Department: Psychology

Degree programme: Master

Module: Multivariate statistics

This module is taught entirely in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: V. Samarasinghe

Requirements: none

Room	Day, Time	Begin
GAFO 04/615	Wen 10 - 12 a.m.	13.04.2011

Course description:

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.

Topics:

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

The primary language of instruction for this course is English. However, all attempts will be made to provide a German translation when necessary.

Proofs of academic achievement: n.s.

NEUROECONOMICS

Language: English

Department: Psychology

Degree programme: Bachelor

Module: Neuroeconomics

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Kasties/Pinnow

Requirements: none

Room	Day, Time	Begin
GAFO 04/425	Tue 10 - 12 a.m..	05.04.2011

Course description:

Does the stock market make sense? Is there a need to play fair? And how do you compare a law

degree to a Mars bar?

This Seminar will be an introduction to the fundamentals of neuroeconomics: We will discuss economic theories of behavior, how 'rational' decisions are modulated by emotional and evolutionary history as well as the neuronal systems underlying decision making and reward.

Proofs of academic achievement: Students will be expected to present chosen topics and actively participate in the discussion of current research literature.

MATHEMATICAL PSYCHOLOGY

Language: English

Department: Psychology

Degree programme: Bachelor

Module: Mathematical Psychology

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: S. Cheng

Requirements: none

Room	Day, Time	Begin
GA 04/187	Wednesday 2 - 4 p.m.	n.s.

Course description:

The use of mathematical models and methods in psychology has a long history dating back to the 1800s. In this course, We will use an intuitive approach to mathematical psychology, rather than dwell on rigorous mathematics. The topics will include perception, decision-making, memory and learning. The mathematical methods covered will range from simple equations with two variables to simulations of large neural networks.

This course will be taught in English and includes lectures, student presentations and practical exercises in a computer lab. Previous experience with software such as Mathematica & Matlab is not a requirement. This course is open to Bachelor students of more quantitative disciplines who would like to see mathematics applied to the description of behavior and cognition.

Proofs of academic achievement: n.s.

SOCIAL COGNITION AND PSYCHOPATHOLOGY

Language: English

Department: Psychology

Degree programme: Master

Module: Social cognition and psychopathology

Course type: seminar

Credit Points: 3

Teacher/Lecturer: Williams

Requirements: none

Room	Day, Time	Begin
GA 04/187	Wen 2 - 4 p.m.	n.s.

Course description:

This course will examine selected topics in social cognitive theory and its approach to psychopathology. These include the consistency and variability of behavior across situations, reciprocal causation among persons, their environments, and behavior; social cognitive models of emotion and motivation; clinical versus statistical prediction of behavior; self-efficacy theory; and traits and mental disorders contrasted with social cognitive "person variables."

Proofs of academic achievement: n.s.

SPATIAL NAVIGATION AND MEMORY

Language: English

Department: Psychology

Degree programme: Master

Module: Spatial Navigation and memory

Course type: seminar

Credit Points: 3

Teacher/Lecturer: M. Yosida

Requirements: none

Room	Day, Time	Begin
GA 04/187	Thursday 2 - 4 p.m..	n.s.

Course description:

This seminar focuses on the function of the medial temporal lobe (MTL) in spatial navigation. Single unit recordings from areas in the MTL such as the hippocampus and the entorhinal cortex during spatial tasks have been providing vast amount of insight to the function of the MTL. 'Place cells' in the hippocampus fire dependent on the location of an animal in an environment, 'head direction cells' in the presubiculum fire dependent on the direction of animal's head, and 'grid cells' in the entorhinal cortex fire at many locations to form a hexagonal grid that covers each 2D environment. The fact that neurons from different subregions of the MTL provide different types of navigational representation suggests a functional segregation within the MTL.

'Theta phase precession' of the place cells and the grid cells provides evidences for phase coding and an optimized firing pattern for synaptic plasticity. The 'replay' of activity of place cells during sleep provides evidences for the possible role of the MTL in memory consolidation.

Finally, we will study the underlying mechanism for place representation with an overview of computational models. This course will take the form of a journal club but some background knowledge will be provided during lecture.

Proofs of academic achievement: Presentation (students can chose whether they're graded or not)

FACULTY OF SOCIAL SCIENCE

www.sowi.rub.de

Contact:

Malte Pfau
GC 03/325
Tel: 0234/32-22966
Email: international-services@sowi.rub.de
Consultation hours: Thursday 12.00-14.30

GUNS AND BUTTER: FOREIGN POLICY DECISION-MAKING SINCE THE FINANCIAL CRISIS

Language: English

Department: Political Science

Degree programme: Bachelor

Module: International Relations

Module taught entirely in foreign language: Yes/no

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: Laura Carsten

Requirements: synopses (1 site per text) to the below-mentioned literature. Active and continuous participation in terms of short presentations of the literature and discussion.

Room	Day, Time	Begin
GBCF 05/606	Thursday 10.15-11.45	07/04/2011

Course description:

Determining why governments do what they do when they do it is one of the major intellectual puzzles in the field of political science. This course will tackle this puzzle by combining classical and modern decision-making theories with traditional International Relations theories in the context of decisions made since the start of the global financial crisis in 2007. The first section of the course will focus on the elements of the various theories, identifying both their strengths and weaknesses. The second section of the course will apply the various theories to decision-making processes which have occurred since 2007. Specifically, the course will examine the often heard tradeoff between guns (military expenditures) and butter (economic considerations) and each element's impact on decision-making generally, on each other, as well as on other considerations relevant to governments which may not fall under either umbrella (for example, cultural or environmental ones).

Literature:

Allison, Graham T. 1969. Conceptual Models and the Cuban Missile Crisis. *American Political Science Review* 63.3: 689-718.

- Reinhart, Carmen M. and Kenneth S. Rogoff. 2008-2009. The Aftermath of Financial Crises. Paper prepared for the American Economic Association meeting, San Francisco, January 3. Available online: <http://www.economics.harvard.edu/faculty/rogoff/files/Aftermath.pdf>.
- Ripsman, Norrin M. 2005. False Dichotomies: Why Economics Is High Politics. In Peter Dombrowski, ed. *Guns and Butter: The Political Economy of International Security*. Boulder: Lynne Rienner Publishers
- Schafer, Mark and Scott Crichlow. 2002. The "Process-Outcome" Connection in Foreign Policy Decision-Making: A Quantitative Study Building on Groupthink. *International Studies Quarterly* 46.1: 45-68.
- Stern, Eric. 2004. Contextualizing and Critiquing the Polyheuristic Theory. *The Journal of Conflict Resolution* 48.1: 105-126.

Proofs of academic achievement: synopses (see above), presentation, thesis paper, paper.

COMPARATIVE & TRANSNATIONAL RESEARCH IN ORGANIZATION OF WORK - SELECTED STUDIES & OWN RESEARCH

Language: English

Department: Sociology

Degree programme: Master

Module: Organization and Society (AOG)

Module taught entirely in foreign language: Yes/no

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: Dr. Claude Hubain, Martina Maletzky, Martin Seeliger

Requirements: Bachelors Degree

Room	Day, Time	Begin
GBCF 05/606	Thursday 14.15-15.45	07/04/2011

Course description:

In the course theories about international organizations and research on border-crossing activities of multinational companies and organizations will be discussed. A special focus will be set on an internationally comparative approach. Our agenda will focus on the types of studies conducted on different levels of the empirical research. Topics of the course are: international organisations and their activities, typologies of multinational organizations, comparative studies in organizational research as well as challenges of coordinating international organizations. The participants will have the chance to gain insights in a current research project about crossborder coordination of organizations that are located in Germany as well as in Mexico. For students who are interested, this practical link provides the opportunity to gather own experience in empirical research. Moreover, for those who are interested a follow-up seminar could

be held in the winter term, containing the opportunity to conduct partly-funded own field-work in Mexico.

(For more information visit <http://www.ruhr-uni-bochum.de/sozomm>)

Proofs of academic achievement: Proof of participation (Teilnahmeschein): The students have to participate actively in all sessions (two failures maximum) and to elaborate for each session a written resume - alternatively to answer some questions concerning the content (1 page for each work session) of the basic seminar literature as well as to hold a presentation that is based on an own short empirical case study. These presentations have to be approved by a lecturer in advance. Proof of performance (Leistungsnachweis): The empirical case study may be the basis of a written term paper (15-20 pages) based on the empirical case study. Other matters are also accepted.

PATIENT RIGHTS AND HEALTHCARE COMPLAINTS

Language: English

Department: Social Policy and Social Economy

Degree programme: Master

Module: Special and current sections of the healthcare system (SAG)

Module taught entirely in foreign language: Yes/no

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: Stuart McLennan

Requirements: Bachelors Degree in... /...

Room	Day, Time	Begin
t.b.a.	t.b.a.	April 2011

Course description:

A number of social, economic, cultural, ethical and political developments have led to patient rights and healthcare complaints becoming increasingly important issues for health systems. This seminar will consider Germany's approach to these issues via an international comparative analysis. While there will be substantial overlaps, the course will be divided into three parts:

1. Background

Medical Error: prevalence, human(economic impact, types of errors (person/system). Patient Safety Movement: patient centered care, safety culture, initiatives in Germany.

2. Patient Rights

Nature of rights: positive/negative rights, social/individual rights.

Models of regulation: special legislation, split legislation, charters.

Implementation: influence of culture (medical/national), impact of resource constraints.

Protection of rights: right to complain.

3. Healthcare Complaints

Purpose of complaint systems: accountability/quality improvement.

Outcomes sought: compensation/non-monetary outcomes.

Approaches to healthcare complaints: malpractice litigation, health ombudsman, insurance.

Issues: natural justice, hindsight/outcome bias, defensive medicine.

Proofs of academic achievement: Assessment will be based on course attendance/participation, presentation, and written assignment.

THE G-20, THE IWF AND REFORMS OF THE INTERNATIONAL FINANCIAL ARCHITECTURE

Language: English

Department: Political Science

Degree programme: Master

Module: International Institutions and Processes (IIP)

Module taught entirely in foreign language: Yes/no

Course type: Seminar

Credit Points: 4,5

Teacher/Lecturer: PD DR. Heribert Dieter

Requirements: Interest in international political economy and the willingness to address complex issues. Since most of the debate on international finance and virtually all literature will be in English, participants have to be able to read and discuss in English.

Room	Day, Time	Begin
GCFW 04/703	Tuesday 12 .15-13.45	05/04/2011

Course description:

After the recent financial crises, including the lasting debate on the future of the eurozone, there has been an intensive debate on the international financial architecture. The International Monetary Fund and the G-20 are key institutions in this discussion. The IMF, before the global financial crisis an institution lacking both customers and legitimacy, has experienced a renaissance since 2008. Today, the fund plays a key role in the Greek and Irish bailout as well as in the broader European Financial Stability Facility. The G-20, once created as a forum for ministers of finance, is seen by some observers as the key institution for providing global economic governance. However, after a bout of euphoria the G-20 appears to be increasingly unable to deliver. The following specific issues will be discussed in the seminar:

- " The function of the IMF in the Bretton Woods regime
- " The changing role of the IMF in the debt crises of the 1980s and 1990s
- " Failed in Asia and Argentina: the policies of the IMF in previous crises
- " New challenges: the IMF in the global financial crisis
- " From G-8 to G-20
- " The G-20 Summits - delivering substantial results?

- " Divergence or convergence of interests in the G-20?
- " The debate on current account imbalances
- " Options for reform - What could be done to make future crises less likely and less damaging?
- " Will the eurozone have to be split up?

Literature:

Full list will be available in the first meeting

Bhagwati, Jagdish (1998): The Capital Myth. The Difference between Trade in Widgets and Dollars, in: *Foreign Affairs*, Vol. 77, No. 3 (May-June 1998), pp. 7-12

Brender, Anton; Pisani, Florence (2010) *Global Imbalances and the Collapse of Globalised Finance*. Brussels: Centre for European Policy Studies, available at <http://www.ceps.eu/book/global-imbances-and-collapse-globalised-finance>.

Dieter, Heribert; Seabrooke, Leonhard; Tsingou, Eleni (2009): *The Global Credit Crisis and the Politics of Financial Reform*, GARNET Policy Brief No. 8, January 2009, in the web at http://www.garnet-eu.org/fileadmin/documents/policy_briefs/Garnet_Policy_Brief_No_8.pdf

Dieter, Heribert (2006): *The Decline of the IMF. Is it Reversible? Should it be Reversed?*, in: *Global Governance. A Review of Multilateralism and International Organizations*, Vol. 12, No. 4 (2006), pp. 343-349.

Eichengreen, Barry (2009) *Out of the Box Thoughts about the International Financial Architecture*. IMF Working Paper WP/09/116, at <http://www.imf.org/external/pubs/ft/wp/2009/wp09116>

Helleiner, Eric (2010) 'A Bretton Woods Moment? The 2007-08 Crisis and the Future of Global Finance', *International Affairs*, 86(3):619-36.

Johnson, Simon (2009): *The Quiet Coup*, in: *The Atlantic Monthly*, May 2009, in the web at: <http://www.theatlantic.com/doc/print/200905/imf-advice>.

Kindleberger, Charles P. (1978): *Manias, Panics, and Crashes*, New York: Basic Books 1978.

Ostry, Jonathan et al. (2010) *Capital Inflows: The Role of Controls*, IMF Staff Position Note, SPN/10/04, available at <http://www.imf.org/external/pubs/ft/spn/2010/spn1004.pdf>.

Reinhardt, Carmen; Rogoff, Kenneth (2009): *This Time is Different: Eight Centuries of Financial Folly*, Princeton: Princeton University Press.

Warwick Commission (2007) *The Multilateral Trade Regime: Which Way Forward?* at: <http://www2.warwick.ac.uk/research/warwickcommission/archive/worldtrade/report>.

Proofs of academic achievement: Presentation and term paper (6000 words). In addition, participants will provide a one-page summary of five essential texts, which will be provided together with a full list of references in the first session. This course is credited.

FACULTY OF SPORTS SCIENCE

<http://www.spowiss.rub.de/index.html>

Contact:

Prof. Dr. Michael Kellmann
 Room 2/207
 Tel: 0234 32-28448
 Email: Michael.Kellmann@rub.de
 Consultation hours: On sabbatical in Summer Term

NEW ISSUES IN PHYSICAL CONDITIONING APPLIED TO INTERMITTENT SPORTS

Language: English

Department: Lehrstuhl für Trainingswissenschaft

Degree programme: Master

Module: Modul 1: Optionale Studien

This module is just partly taught in English

Course type: Seminar

Credit Points: 3

Teacher/Lecturer: Dr. Jaime Fernandez-Fernandez

Requirements: Bachelors Degree

Room	Day, Time	Begin
n. s.	14. – 17.06.2011	Briefing on 02.02.2011, HMA SR

Course description:

This seminar will present new issues applied to training in intermittentsports (e.g., football, tennis, handball, basketball...). These may include: the adaptations to anaerobic and aerobic training, including acute vs chronic responses; detraining and concurrent strength and endurance training. Also, the seminar examines the advanced study of resistance training (e.g., sport-specific resistance training and power optimization for elite athletes and teams). Important issues related to fitness and training in intermittentsports will be also discussed, including warm-up, injury and rehabilitation.

Proofs of academic achievement: n. s.

This course is especially suitable for exchange students.

LANGUAGE COURSES

CENTER FOR FOREIGN LANGUAGE TRAINING

www.rub.de/zfa

Contact:

Ms. Jennifer Wenderoth
Tel: 0234/32- 28182
Email: zfa@rub.de

a) Language Courses

The Centre for Foreign Language Training (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 Language Centre currently offers classes for 20 different languages, such as:

Arabian, Chinese, Danish, Dutch, English, French, Hungarian, Italian, Japanese, Croatian/Bosnian/Serbian, Greek, Norwegian, Polish, Portuguese, Russian, Swedish, Spanish 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 in addition to regular studies. These courses are designed for the special needs of foreign students, doctorals 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 ZFA also provides various opportunities for individual learning and offers support via counselling individual assistance:

- Tandem (Partners with different mother tongue that exchange and support one another in learning the other language)
- Centre for self- organized learning
- Language- learning counselling

Impressum

Edited and Published by:

International Office
Dezernat 2
Ruhr-Universität Bochum
Forum Nord Ost (FNO) 01 / 02
Universitätsstrasse 150
D-44780 Bochum

Print run:

1000 copies

Printed in March 2011