

The State Government of North Rhine-Westphalia



Scholarship Program of the German State of North Rhine-Westphalia for students from Israel

Call 2014

Scholarship places at institutions of higher education in North Rhine-Westphalia

(current version, as of December 13th 2014)

Please choose the scholarship place(s) you seek to apply for; fill in the corresponding identification number (#) from the following list into the application form which you can download from http://www.uni-duesseldorf.de/NRW-Nahost-Foerderprogramme

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Disciplines (multiple entries possible)

Architecture / Art / Design	• FH BI 2
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Biology / Life Sciences / Geography / Environmental Science / Agriculture	• BRS 2
	• DS 4
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	• MS 5
Business (Administration) / Economics	• BC 4
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	• FH BI 1
Chemistry / Chemical Engineering / Biochemistry / Pharmacy	• BI 1
	• BRS 1
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	• MS 1
Computer Science / Informatics / Information Sciences	• DS 4
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	• FZJ 6
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	• PB 3
Cultural Studies / Literature / Philology / Linguistics	• BC 3
	• DO 1
	• DS 1
	• DS 2
	• DS 5
	• MS 4
Educational Science / Didactics	• DE 1

	•	DE 2
	•	DE 3
	•	WU 1
History / Archaeology / Anthropology	•	BI 2
	•	BC 1
	•	BC 3
	•	DS 5
	•	KL 2
	•	MS 4
Law	•	KL 1
	•	KL 3
	•	FH BI 1
Mathematics	•	BI 3
	•	DS 3
	•	FZJ 3
	•	FZJ 4
	•	FZJ 6
	•	WU 2
	•	PB 4
Mechanical Engineering / Process Engineering / Material Engineering / Electrical Engineering	•	BC 4
	•	BC 5
	•	BRS 1
	•	FZJ 2
	•	FZJ 6
	•	FZJ 7
	•	MS 3
	•	PB 1
	•	PB 2
	•	PB 3

Media Studies / Communication Science / Journalism / Film Studies	•	DS 1
Medicine / Health Sciences	•	BC 6
	•	FZJ 3
	•	FZJ 4
Philosophy / Theology / Religious Studies	•	BI 2
	•	BC 2
	•	MS 4
Physics / Geophysics / Nanotechnology / Astronomy	•	BI 1
	•	DS 4
	•	FZJ 1
	•	FZJ 2
	•	FZJ 3
	•	FZJ 5
	•	FZJ 6
	•	FZJ 7
	•	MS 1
	•	MS 2
	•	MS 3
	•	MS 5
	•	WU 2
	•	PB 4
	•	WU 3
Psychology / Cognitive Science / Neuroscience	•	BC 6
	•	DE 2
	•	DE 3
	•	DE 4
	•	FZJ 4
Social Sciences / Sociology / Politics	•	BI 2

	•	WU 1
Spatial Planning / Civil Engineering	•	FH BI 2

Contacts and further information

Heinrich-Heine-University Duesseldorf

International Office Universitaetsstrasse 1 D–40225 Duesseldorf Germany Dr. Guido Quetsch

Phone: +49 (0)211 / 81 14092 Fax: +49 (0)211 / 81 11334

Bielefeld University (BI)

Bielefeld - the "university of short ways" and of "interdisciplinary intertwinement"! Whereas elsewhere the departments and institutes are spread all over the city, Bielefeld has its entire university in one building. This way, students may even utilize their lecture breaks and peek into other classes or lectures. In the library, the sections of related departments, e.g., physics and chemistry are found right next to each other. Due to the compactness of the building, it could be equipped with a computer network, even traversing department boundaries, e.g., mathematics and physics, at an early stage. Nowhere else is interdisciplinarity practiced in this way; there's even a special-purpose Center for Interdisciplinary Research, "ZiF". In particular, the use of expensive equipment such as transmission electron microscopes is shared between the biology and physics departments, the math department's visualization lab is open to people of other disciplines, as well. Physicists and chemists closely collaborate in some laboratories. There is a joint study program called "Natural Sciences and Information Technology" in cooperation with the Technical Faculty. Young scientists come to Bielefeld from all parts of the globe to participate in our research activities. There exist close contacts with the research centers DESY at Hamburg and CERN (elementary particle physics) at Geneva as well as with BESSY (molecular and surface physics) at Berlin and ESRF at Grenoble, among others. There are a multitude of cooperations with research institutions and universities, domestic and foreign.

Bielefeld University offers the opportunity of taking a German language course at "PunktUm".

www.uni-bielefeld.de

Contact: Dr. Thomas Luettenberg,

Dezernat III

Head/International Office

Universitaetsstr. 25, D-33615 Bielefeld

Phone: +49-(0)521/106-4088,

E-mail: thomas.luettenberg@uni-bielefeld.de

BI 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Physics	Prof. Dr. Armin Goelzhaeuser	2	Physics, Chemistry	B, M
Time frame:	April – December			
Institute's focal research areas	Supramolecular Physics, Chemical Nanolithography, Carbon Nanomembranes			

BI 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Bursars' degree program (B = Bachelor; M = Master; P= PhD)
Institute for Science and Technology Studies (IWT)	Prof. Dr. Martin Carrier	1	Sociology, Philosophy, History	М
Time frame:	June – December			
Institute's focal research areas	Science and Technology Studies; Philosophy of Science, History of Science, Public Understanding of Science;			
	History, Philosophy and Social Studies of Science			

BI 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Bursars' degree program (B = Bachelor; M = Master; P= PhD)
Faculty of Mathematics	Prof. Dr. Christopher Voll	2	Mathematics	B, M , P
Time frame:	April – December 2014 (precise dates to be agreed)			
Institute's focal research areas	For general information about the Faculty of Mathematics, see http://www.math.uni-bielefeld.de/de For information about C. Voll's research, see http://www.math.uni-bielefeld.de/~voll/			

Bielefeld University of Applied Sciences (FH BI)

Faculties: Design, Architecture and Civil Engineering, Technics (new), Engineering and Mathematics, Social Sciences, Business and Health

Courses mainly in German as language of instruction

Winter semester 2013/2014: about 9.600 students enrolled, including 240 international students

All faculties offer language classes in German, either at the faculty itself or in cooperation with a private language institute for guest students

http://www.fh-bielefeld.de/

Contact: Grit Dörfel, Head of International Office, University of Applied

Sciences,

Kurt-Schumacher-Str. 6, 33615 Bielefeld, Germany

Phone: +49-521/106-7710

Fax: +49-521/106-7790

E-Mail: grit.doerfel@fh-bielefeld.de

FH BI 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Faculty of Business and Health, Department of Business	Prof. Dr. Uwe Roessler	2	Business Administration, Business Information Systems, Business Law, Business Psychology, International Studies in Management	M Teaching language: German/English (depends on the course) Working language: German and English Personal consultation by professors and teachers in English Papers can be written in English
Time frame:	September 1 st – December 20 th			
Institute's focal research areas	Business with focus yestems, Law, Psystems, Law, Ps	us on Gene ychology, a nould partici ne can work ors. of Nursing in the field ulting and to	n one Research Field. ral Business Administra nd International. pate in our course prog at a special subject in and Health there would of healthcare, nursing eaching in the instruction	gramme and it is cooperation with dalso be the (practice);

FH BI 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Faculty of Architecture and Civil Engineering	Prof. DrIng. Johannes Weinig	2 for English speaking students (M), 5 for German speaking students (B and M)	Civil engineering or architecture	B Architecture, B Civil engineering (classes only in German language), M Architecture, M Civil Engineering (Classes and projects in English language possible)
Time frame:	02.05.2014-11.07.	2014		
	08.09.2014-19.12.	2014		
Institute's focal research areas	- Constructi stadiums) - Water eng	ineering an	nd skills light buildings (e.g. spo d water management ion methods	orts halls or

FH BI 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)	
Faculty of Design	Prof. Dr. Roman Bezjak	2	Photography and media Design and communications design Fashion	B, M Classes in German language Personal consultation by professors and teachers in English Papers can be written in English	
Time frame:	01.09.2014 -19.12.2014				
Institute's focal research areas	Fotography and mediaBook designCollections design (fashion)				

Ruhr-University Bochum (BC)

At Ruhr-Universitaet Bochum (RUB) currently study 32,000 students; more than 4,500 are international students from abroad. RUB is a modern and innovative university that offers its students degree programmes in almost all academic areas and excellent research facilities.

German language courses start each October (winter term) and April (summer term) and are free of charge for all RUB students.

RUB homepage: http://www.rub.de

International: http://international.rub.de

Contact: Ms. Jonna Haensel-Neumann

Ruhr-Universitaet Bochum

Studierendenhaus (SH), Raum 1/193 Universitätsstr. 150, D-44780 Bochum

Phone +49-234-32-25425, Fax +49-234-32-14684,

E-mail: <u>Jonna.Haensel@uv.ruhr-uni-bochum.de</u>

BC 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Archaeological Science	Dr. Patric Kreuz	3	Archaeology of the Graeco-roman eastern Mediterranean / Near East; Phoenician archaeology	M; P
Time frame:	May – July			
Institute's focal research areas	The Decapolis in the Graeco-roman period; The Herodian kingdom; Archaeology of the Phoenician diaspora.			

BC 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Institute for Philosophy II	Prof. Dr. Albert Newen; Prof. Dr. James Wilberding	2	Theoretical Philosophy; Ancient Philosophy	М
Time frame:	April – December			
Institute's focal research areas	The institute is specialized in Philosophy of Language, Mind and Science. It is also offering Logic and Epistemology and a program in Ancient Philosophy			

BC 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Centre for Mediterranean Studies	Eleni Markakidou M.A.	1	Mediterranean Studies Archaeology Social and Cultural Antrophology Diaspora Studies	B, M, P
Time frame:	May – July or Okto	ber - Dece	mber	
Institute's focal research areas	At the heart of our research are the issues of resources, connectivity and translocation in the Mediterranean region from ancient times until the present. The networks and entanglements of the Mediterranean protagonist are examined with a historical focus as are conflicts and the processes of differentiation.			

BC 4

Faculty for Mechanical Engineering M. sc. Dennis Ferdinand Institute for Thermo- and Fluid Dynamics Chair for Fluid Process Engineering M. sc. Dennis Ferdinand Institute for Thermo- and Fluid Dynamics Chair for Fluid Process Engineering	B, M, P

Time frame:

Ongoing start but for at least 6 weeks.

Institute's focal research areas

Modular Chemical Plant

Modular plants consist of modules, which are standardized, autonomously operating parts of the plant. These modules are technically and organizationally limited areas of the plant, which fulfill defined tasks. Starting with these modules, companies can create capacity either by equaling-up modules from general structures or by numbering-up equipment. In the chemical industry, this approach has not been employed extensively hitherto, although this industry faces challenges similar to other industries. These are, in particular, increasing global competition, shorter product life cycles, and more volatile markets that are difficult to forecast. Therefore, more flexible production concepts, like modular plants, may help to meet such challenges.

In the chemical industry a great number of reactions and thermal separations are realized in batch-processes. One main challenge is the development of continuous processes instead of batch-processes which fit in standardized modules. One example is the mixing of different fluids in a stirring vessel. In a continuous process the mixing could be realized in a static mixer with probably less energy use. The capacity of the stirring vessel can be reached by numbering up the modules of static mixers. Furthermore, there exist continuous processes, which are realized in big separation columns or reactors. One task is the characterization of those reactors and separation-units and to examine the possibility of process intensifications in modular-reactors and modular-separation-units. The use of modular-separation-units in particular, respectively the units itself, are not investigated extensively until now. The aim is the creation of standardized modules for modular plants with the result that every process can be realized in a modular plant.

The student will participate in a research program dealing with "Modular Chemical Plants". The work contains modeling and computer simulation, as well as literature research and the evaluation of the data obtained with the help of modern software tools such as Microsoft®Excel and simulation software. The student will be instructed and guided through every step of the research project by the German PhD student.

BC 5

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Faculty for Mechanical Engineering	Sarah Paul	1	Mechanical-, Process-, or Industrial	B, M, P
Institute for Thermo- and Fluid Dynamics			Engineering or Business/ Economics	
Chair for Fluid Process Engineering				
Time frame:	Ongoing start but	for at least	6 weeks.	
Institute's focal research areas	Modular Chemica		dules, which are standa	
	technically and organizationally limited areas of the plant, which fulfill defined tasks. Starting with these modules, companies can create capacity either by equaling-up modules from general structures or by numbering-up equipment. In the chemical industry, this approach has not been employed extensively hitherto, although this industry faces challenges similar to other industries. These are, in particular, increasing global competition, shorter product life cycles, and more volatile markets that are difficult to forecast. Therefore, more flexible production concepts, like modular plants, may help to meet such challenges. For chemical process not only economical but also ecological investigations have to be carried out by life cycle assessments. Life-cycle assessment is a technique to assess environmental impacts associated with all the stages of a product's life from-cradle-to-grave id est from raw material extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling. In this regard logistics in terms of warehousing, material handling and transportation systems as well as production network, locations and transportation for modular chemical plants have to be developed and assessed in ecological terms. The student will participate in a research program dealing with "Modular Chemical Plants". The work contains modeling and computer simulation, as well as literature research and the evaluation of the data obtained with the help of modern software tools such as Microsoft®Excel and simulation software. The student will be instructed and guided through every step of the research project by the German PhD student.			

BC 6

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Dept. Of Neuropsychology	Prof. Dr. Boris Suchan	2	Neuropsychology, Cognitive Neuroscience	B, M, PhD
Time frame:	April – July; October - December			
Institute's focal research areas	We have many research topics. We are interested in the processing of faces and bodies in the human brain. We are also interested in the involvement of the medial temporal lobe in the formation of long term memory and also in perception. As techniques, we are using EEG and fMRI. Please take a look at our homepage to get an impression of our research topics (http://www.ruhr-uni-bochum.de/neuropsy/).			

Bonn-Rhein-Sieg University of Applied Sciences (BRS)

The Bonn-Rhine-Sieg University of Applied Sciences (BRS U) was established in 1995 as a national university funded by the government.

BRS U specializes in business administration, natural sciences, computer science, social security management, technical journalism and engineering. The focus areas for BRS U are applied research and development, technology transfer using international and interdisciplinary approaches. There is an emphasis on internships and practical applications in industry and research and joint research projects with numerous companies and institutions.

As English or another foreign language is a required subject for all students, the university has established a central Language Centre which designs, coordinates and carries out foreign language instruction on all three campuses. These specific-purpose courses are taught predominantly by native speakers, and state-of-the-art IC technologies are often implemented, primarily through the use of new language labs and self-access centres in both Rheinbach and Sankt Augustin. Especially for foreign students, "German as a foreign language" is offered including the TestDaf Exam.

The campuses in Sankt Augustin, Rheinbach and Hennef are well-equipped with modern laboratories, and technical equipment. BRS U has approximately 120 Professors of which many receive research grants and other 280 teaching staff. There are about 120 support staff including technical and administrative employees. BRS U currently has around 5500 students and the Department of Natural Sciences recruits about 200 undergraduate in Bachelor programs and about 30 students in a Master program each year in two study courses: Applied Biology (as an international study course), Chemistry with Material Sciences (as an German study course), and Forensic Sciences (taught in German and English).

www.h-bonn-rhein-sieg.de

Contact: Ms.Lea Mund

Hochschule Bonn-Rhein-Sieg

(Bonn-Rhine-Sieg University of Applied Sciences)

International Office - Welcome Centre

Grantham-Allee 20 53757 Sankt Augustin

Germany

Tel +49 (0) 2241/865-671 Fax +49 (0) 2241/865-8671 E-Mail: lea.mund@h-brs.de

BRS 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department of Natural Sciences / Organic and Polymer Chemistry	Prof. Dr. Margit Schulze	2	Chemistry, Material Science	В, М. Р
Time frame:	July 1 st / August 1 st - I	December '	15 th	
Institute's focal research areas	July 1 st / August 1 st - December 15 th The work deals with: a) development of polymer scaffolds for stem cell differentiation as proliferation b) development of polymers used in dental medicine c) development of polymeric materials from renewable resources (biomass) The work encompasses the following topics for potential scholars holder: • Synthesis of appropriate polymers (e.g. biopolymers such as microspheres and hydrogels) • Characterization of polymer structure • Surface modification / functionalization • Bioactivation of the scaffolds (e.g. via P2 ligands)			

BRS 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)		
Department of Natural Sciences	Prof. Dr. Edda Tobiasch	2	Biology	M, P		
Time frame:		July 1 st / August 1 st – November (any time period within this time frame is possible, but it must be at least 10 weeks)				
Institute's focal research	The work deals w	The work deals with stem cell differentiation and signal transduction.				
areas	Overview:					
	Recent progress in our understanding of stem cell differentiation and cell transplantation has opened new therapeutic avenues in the treatment of human diseases involving chronic or acute tissue-specific cell loss. Consequently, experimental cell replacement strategies have been attempted involving adult stem cells with the aim of developing therapies.					
	Human mesenchymal stem cells which are isolated from adipose tissue have the advantage of potential autologous transplantation ability. There is evidence that they can be differentiated in chondrogenic, osteogenic, adipogenic and myogenic lineages. Inductions of the cells into multiple mesenchymal lineages already resulted in the expression of several lineage-specific genes, proteins and specific metabolic activity.					
	We aim at investigating fat-derived MSC, as potential donor cells, for their ability to differentiate in the osteogenic and beta cell direction for future treatment of diabetes and large bone defects and in the adipogenic direction to investigate the influence of the differentiating fat cell in the development of atheroclerosis.					
			senchymal stem cells used to improve dental			
			genes for the character body parts during differ			
	More information on http://fb05.fh-bonn		ects ca be found on the .de/tobiasch.html	homepage:		
	 The work encompasses the following topics for potential scholarship holder: Differentiation and characterisation of adult, human mesench stem cells Determination of the role of the differentiating adipocyte in the pathogenesis of diabetes mellitus type 2 P2 and Hox signalling in human stem cells Biocompatibility testing of nano-structured polymers as scaffed 3D tissue engineering Stem cell interaction with natural and artificial scaffolds 					
	students, and seve	eral Master	he lab leader, a scienti - and Bachelor student ents will take care for th	s working on their		

TU Dortmund University (DO)

The TU Dortmund University was established in 1968 and comprises 16 Faculties, Collaborative Research Centres, Graduate Schools & Graduate Colleges, and a number of affiliated institutes as well as other associated and science institutes like Fraunhofer Institutes-and the Max Planck Institute for Molecular Physiology (MPI). The number of students in the fall term WS 13/14 amounted to almost 32.000. The staff consists of 350 professors, 1.900 academics and about 1.300 non academic staff.

The TU Dortmund University supports interdisciplinary cooperation between its fields of study. To combine and analyze the strengths and activities a programme of thematic "research bands" has been developed. The "bands" allow cross-referencing beyond the bounds of single departments, faculties and disciplines.

The TU Dortmund University has set itself an ambitious goal: research, teaching and courses of study are to be given an even more consistently international orientation over the coming years. In addition to its integration within the region, with all its structural changes, the university is deliberately focusing on a second aspect: Within the scope of a comprehensive network of international university partnerships and research co-operations, the TU Dortmund University will strengthen its position among the global players in the field of science.

The university already offers extensive support measures for foreign students. With the regular orientation programme "Come2Campus", the Office for International Relations helps international "freshmen" to cope with the new living and learning conditions. Together with the city of Dortmund, the university strives to improve the services provided for foreign students.

A further way of improving the general conditions for successful completion of courses of study for international students is to increase the number of lectures held in English.

Building the network connecting the TU Dortmund University with partner institutions in Europe and all over the world has been a priority for decades. A huge number of co-operations among students, academics, institutes and departments, as well as world-wide university partnerships, opens up global thinking for the region and makes the university's achievements and competence available to the scientific community worldwide.

www.tu-dortmund.de

TU Dortmund University offers a 4-week intensive German class prior to each semester, i.e. in the months of March and September. During the semester students can take part in German as a foreign language classes offered by our Language Center. More information: http://www.aaa.uni-dortmund.de/cms/en/International_Students/Exchange_Students_ERASMUS_/German_Language_Course/index.html

Contact: Dr. Barbara Schneider

TU Dortmund University / International Office Emil-Figge-Str. 61, D-44227 Dortmund,

Phone: +49-(0)231/755-5331

E-mail: barbara.schneider@tu-dortmund.de

DO 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department for English and American Studies	Prof. Dr. Walter Gruenzweig	1	American Studies; Cultural Studies and related fields	B, M, P
Time frame:	October – December			
Institute's focal research areas	European-American relations, images of the United States, Anti-Americanism, Religion & American Culture, reception of American literature abroad, American political cultures, Exile in the United States, Jewish-American Literature.			

Heinrich-Heine-University Duesseldorf (DS)

Even though the French emperor Napoleon I planned to found a university in Duesseldorf in 1811, with the Rhine area being thought of as an intellectual buffer zone between France and Prussia, Duesseldorf had to wait one more century. In 1907 the Duesseldorf Academy for Applied Medicine was founded and opened together with the newly-built Municipal Hospital, which was at that time the most modern clinical complex in the German Empire. Since the Academy had no university constitution, it was only allowed to instruct medical trainees, not students. The academy itself and part of the population launched several initiatives to change the status of the institution. In 1923 they finally succeeded when a university constitution including the right to train students was given to the Medical Academy of Duesseldorf. The study of dental medicine was subsequently incorporated, and by 1935 even doctoral degrees could be awarded in Duesseldorf.

After World War II the federal state of North Rhine-Westphalia and the City of Duesseldorf signed a contract which stated that the federal state would take over the Medical Academy, while the hospitals remained municipally owned. The Medical Academy became the University of Duesseldorf in November 1965, and in January 1966 it became a university with a medical faculty and a combined faculty of arts and natural sciences. In December 1988 the university senate decided to change the institution's name to Heinrich-Heine University Duesseldorf, in commemoration of one of the city's most renowned sons whose critical and inquisitive, poetic mind reached out across national borders and fought against small-mindedness.

Today the university forms the backbone of Duesseldorf's academic reputation. Faced with nation-wide cuts in university spending, the University of Duesseldorf has continued to thrive. Despite its recent foundation it has gained the reputation usually associated only with universities rich in age and tradition. The university's continuous development has made it home to a distinguished range of subjects, including medical science, natural sciences, economics, law, and the humanities. The degree requirements allow for numerous combinations of subjects, and study programs can be tailored to fit individual needs. Some subjects, such as Literary Translation, Yiddish Culture, Language and Literature, and Media Science, are unique features of our curriculum. Further specialties in the Faculty of Arts include Modern Japan Studies, and German as a Foreign Language which address the needs of the international business community. The Faculty of Economics focuses particularly on International Management. European and International Law enjoy an elevated position at the Faculty of Law, which is also a renowned center of commercial law. Duesseldorf has also become a hub of Biotechnology. The focal points of research within the Faculty of Mathematics and Natural Sciences are Genetics and Molecular Biology.

The Faculty of Medicine has gained a reputation for its research in Cardiology; Cell and Gene Therapy form the backbone of clinical research. The Center of Biomedical Research (BMFZ) stands out as a center of excellence. Several institutions devoted to special fields are attached to the university, for example the Institute of Diabetic Research, and the Medical Institute for Environmental Hygiene. The Institute for International Communication is also located on campus.

Ample proof of the confidence that sponsors place in the research conducted at HHUD can be seen in the number of collaborative research centers and research training programs. The University of Duesseldorf ranks 18th among the top 45 universities (113 in total), which together receive 90% of all project funds granted in Germany.

The university's international profile is the result of the active exchange programs it maintains with partner universities in regions as diverse as California and Peking, Reading and Naples. In any given year, about 3000 foreign students come from more than 110 nations, and over 120 guest academics conduct their research here. The total number of students amounts to approximately 25000. The number of faculty exceeds 1500.

Last but not least, the university has the advantage of occupying a pleasant site. After long hours of study it is tempting to take a stroll through the Botanical Garden located right on campus....

www.uni-duesseldorf.de

Contact: Monika Lent-Oeztuerk (Mrs.)

Heinrich-Heine-Universitaet Duesseldorf International Office (Building 16.11)

Universitaetsstraße 1, D-40225 Duesseldorf

Phone: +49-(0)211/811-0726 E-mail: <u>incomings@hhu.de</u>

DS 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute for Media and Cultural Studies	Prof. Dr. Reinhold Goerling	2	Media and cultural studies Film and televison studies Media philosophy	B, M, P
Time frame:	May – Mid of July; October - December			
Institute's focal research areas	 Ecology of Mediaphile Film, traur Expanded Television Aesthetic Intercultur 	osophy na, violence cinema studies theory	9	

DS 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department for Yiddish Culture, Language, and Literature	Prof. Dr. Marion Aptroot	3	Yiddish (including interdisciplinary studies)	B, M, P
Time frame:	April – July or September - December			
Institute's focal research areas	Yiddish: Yiddish Language, Yiddish Literature and Culture, Yiddish Historical Linguistics			

DS 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Mathematics	Prof. Dr. Benjamin Klopsch	1	Algebra /Number Theory, in particular Group Theory	M, P
Time frame:	01.05.2014 - 30.09.2014			
Institute's focal research areas	Profinite groups, p-adic Lie groups, arithmetic groups and their representations.			

DS 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Bioinformatics	Prof. Lercher	2	Informatics, Biology, Physics	M, P
Time frame:	May - December			
Institute's focal research areas	Bioinformatics, especially evolutionary genomics and simulations of metabolic network function			

DS 5

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute for Jewish Studies	Prof. Dr. Stefan Rohrbacher	2	Jewish Studies; History (English language)	B, M, P
Time frame:	Summer term 2014 (May – July)			
Institute's focal research areas	Jewish history of the early modern period, 19th century German-Jewish History, History of Antisemitism			

University of Duisburg-Essen (DE)

Creative inspiration between the Rhine and Ruhr: the University of Duisburg-Essen (UDE) is located in the European region with the highest density of institutions of higher learning. Created in 2003 by the merger of the universities of Duisburg and Essen, the UDE is the youngest university in North Rhine-Westphalia and one of the ten largest universities in Germany. Both campuses are easy to reach and offer some 37,000 students a broad academic spectrum with an international orientation – ranging from the humanities and social sciences to economics and the engineering and natural sciences, including medicine. Students from 130 countries are currently enrolled at the UDE.

In many disciplines the UDE ranks amongst the TOP 10 of German research universities. Over the past three years, research income has risen by 150 percent, a development which is also thanks to the five main research areas: Nano sciences, Biomedical Sciences, Urban Systems, Empirical Research in Education, and Change of Contemporary Societies.

Free German classes in preparation for one's studies see: www.uni-due.de/international/deutschkurse.shtml

www.uni-duisburg-essen.de

Contact: Petra Günther

International Office

University Duisburg-Essen

45117 Essen

Tel.: +49-(0)201-183-2068

Tel.: +49-(0)203-379-2445

petra.guenther@uni-due.de

DE 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Chair of Educational Media and Knowledge Management,	Prof. Dr. Michael Kerres	2	Educational Technology, Instructional Design	M, P
Learning Lab				
Time frame:	12 weeks May - December			
Institute's focal research areas	 Impacts of Implication Social mercontexts Sustainab Instruction learning 	MOOCS for sof BYOD dia for informal implemental design for all des	Open Educational Resor Education in school settings mal learning and in form ntation of learning inno or problem based appro-	mal learning vations paches in online

DE 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Educational Sciences	Prof. Dr. Kerstin Göbel	1	Education Educational psychology Instructional research	M, P
Time frame:	May - Dec			
Institute's focal research areas	Instructional research, acculturation in schools, intercultural learning			

DE 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Educational Sciences	Prof. Dr. Marten Clausen	1	Education Educational psychology Instructional research	M, P
Time frame:	May - Dec			
Institute's focal research areas	Instructional resea	arch		

DE 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)	
Department of Neurology; Motor Control Group	Prof. Dr. Dagmar Timmann	2	Neuroscience, Neuropsychology, Biomechanics	B, M	
Time frame:	12 weeks within April – Dec 2014				
Institute's focal research areas	Clinical Neuroscience; Physiology and pathophysiology of the human cerebellum; Behavioural studies in patients with cerebellar disorders; Structural and functional MRI in patients and controls. Projects will be on reach adaptation in cerebellar disease and studying the effects of transcranial direct-current stimulation (tDCS) on cerebellar deficits; Projects will be done in collaboration with Prof. Opher Donchin, Department of Biomedical Engineering and Zlotowski Center for Neuroscience Ben-Gurion University of the Negev. http://www.uni-due.de/neurologie				

Research Center Juelich (FZJ)

Research Centre Jülich, member of the Helmholtz Association, is one of the major research institutions in Europe.

Key technologies in the areas of health, energy and environment, and information characterize the profile of Forschungszentrum Jülich.

Our potential for meeting the objective of "key technologies for tomorrow" lies in 4,600 employees who work together in an interdisciplinary manner, over 200 cooperation partners in Germany and abroad, a unique infrastructure, and our special expertise in physics, materials science, nanotechnology, and information technology. We harness this potential to generate new solutions for the areas of health, energy and environment, and information.

Forschungszentrum Jülich is proud of the tools it provides for its researchers to do their work: simulation with supercomputers, research with neutrons, imaging techniques for medicine, nanotechnology tools—these modern instruments allow science to break through to new horizons of knowledge. This infrastructure, valued and used by researchers throughout the globe, characterizes Jülich the home of key technologies.

The Research Centre is located near the town of Jülich, **close to the university cities** Aachen, Bonn, Cologne and Düsseldorf. The proximity of Jülich to the Netherlands, Belgium and Luxemburg as well as about 700 international guest scientists per year add to an excellent and inspiring training environment.

German language courses are organised in the context of our in-house training programme and are free of charge.

www.fz-juelich.de

Contact: Gabriele Weiland

Corporate Development (UE)
Forschungszentrum Juelich GmbH

D-52425 Juelich, Germany

Phone:+49 – (0)2461 – 61.3388 Fax:+49 – (0)2461 – 61.1816 e-mail: g.weiland@fz-juelich.de

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)	
Peter Gruenberg Institute (PGI-8)	PrivDoz.Dr. Svetlana Vitusevich	1	Physics, Biophysics or related fields	B, M, P	
Time frame:	Time period from September 1 to December 20, 2014 for three months				
Institute's focal research areas	Transport and noise properties of nanowire field effect transistors, noise spectroscopy, frequency and time domain regimes, microfluidic channels, DNA plasmids, microwave methods, microwave dielectrometry of biological liquids More information under: http://www.fz-juelich.de/pgi/pgi-8/EN/Home/_node.html;jsessionid=234FCD55C867BA608EE9F99DBA 1232C6				

Institute Central Institute of Engineering, Electronics and Analytics (ZEA) ZEA-1- Engineering and Technology Contact institute Dr. Ghale Natour		Number of places	Discipline or subject area Mechanical engineering;	Scholars' degree program (B = Bachelor; M = Master; P = PhD)	
Engineering, Electronics and Analytics (ZEA) ZEA-1- Engineering and	eb	1		M, P	
			Material Science; Physics		
Time frame: End of Au	End of August - end of November				
facilities, technique the Cent develops processe scientific engineers the research institute processe, Paragraphic welding condition	Modern research requires technically sophisticated experimental facilities, expensive laboratory instruments and complicated measuring techniques. The institute part "Engineering and Technology ZEA-1 of the Central Institute for Engineering, Electronics and Analytics ZEA develops and builds technical equipment, instruments, setups and processes on a high level as an important contribution to successful scientific cutting-edge research. More than 150 people, mainly engineers, scientists and technicians are working closely together with the researchers of our scientific partner institutes, and with the other institute parts "Electronic Systems" and "Analytics" of ZEA. For the participants of the NRW Scholarship Program for students from Israel, Palestine, and Jordan ZEA-1 offers the following internships: Welding of special metals with the laser beam under vacuum conditions First studies about laser beam welding in vacuum have shown that				

Previous works with the aim of achieving high weld depth in aluminum and steel alloys show very beneficial results.

The potential of laser beam welding in vacuum of refractory metals, such as titanium, niobium, molybdenum and tungsten, but also of copper were so far still not or only superficially investigated.

To determine the potential of laser beam welding in vacuum as a manufacturing process for scientific apparatus engineering, the limits of pressure-reduced laser application shall be scientifically investigated. The pressure dependency of beam/material interaction and the material properties after laser beam treatment in vacuum shall be examined.

Strength evaluation of glass-ceramic joints for high temperature applications

Solid oxide fuel cells (SOFC) are energy conversion devices for an efficient and clean production of electricity. The aggregates need to be sealed gas-tight and electrically insulating by a glass-ceramic sealant. Unfortunately the insufficient strength often is a problem for the operation of SOFC stacks.

Latest investigations of ZEA-1 have shown that tensile strength measurements can be improved by an adaptation of component geometry of the glass-ceramic joints. The preparation of samples and evaluation of the improved toughness method is the main focus of the scholarship. In further experiments, the influence of different operation conditions like increased temperatures, cyclic and long term ageing of the joints have to be investigated.

Setting up a black body with temperature control for the calibration of an interferometer

A black *body* is an idealized physical body that absorbs all incident electromagnetic radiation, regardless of frequency or angle of incidence. A blackbody at a constant temperature also emits electromagnetic radiation; the so called black-body radiation. The radiation is emitted according to Planck's law, meaning that it has a spectrum that is determined only by the temperature and not by the body's shape or composition.

In the internship the following tasks has to be done:

Determine a cooling concept using Peltier elements.

Performing Temperature measurement and evaluation of the black body radiator surface. Development of a remote control system using LabView to control and readout the temperature.

Testing of the black body system.

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Neurosciences and Medicine (INM-2)	Prof. Andreas Bauer Dr. Simone Beer	1	Physics, Mathematics, Biomedical Engineering, Computer Science	B; M, P
Time frame:	May - December.			
Institute's focal research areas	studying in vivo tra resolution animal I research, where the accuracy is required. Tomography (CT) about the anatomy. The focus for the soft methodology to quantitative accurated. The work may invoked evelopment of dealgorithms or statist. PET is multi-disciple experience collaborated disciplines from chebiology and (pre) collaborated. The hosting group biologists, physicistic group operates a canimal imaging as (e.g. autoradiograp PET imaging studies).	acer pharma PET is used he best posi- he bes	nat the projects offer the arch and teamwork amysics, engineering and arch. Neuroimaging" compreral technicians. Currenter, CT and SPECT so oratory facilities for in vitensive analytical process.	olism. High es in brain I quantitative Computer ary information In the development quality and ombined PET/CT. lation, the e reconstruction The opportunity to mong various I mathematics to ises physicians, antly, the working canner for small vitro techniques esses as parts of
			at <u>si.beer@fz-juelich.d</u> e/home_node.html.	e and http://www.fz-

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)	
Institute of Neurosciences and Medicine (INM-2)	Prof. Andreas Bauer D. Elmenhorst Kroll	2	Medicine / Health Sciences; Biology Psychologie	B; M, P	
Time frame:	May - December.				
Institute's focal research areas	Why do we need to sleep and what are the regulating mechanisms behind the sleep-wakefulness cycle? Which factors influence synapti plasticity and how is neuroreceptor expression affected in neuropsychiatric diseases? These questions describe the main research interests of the hosting institute.				
	The putative scholar will participate in a preclinical or clinical imaging project addressing varying (e.g. within the 24 hrs day-night cycle) or altered (e.g. in states of disease) neuroreceptor expression.				
	In technical terms we use radioactive labeled tracers and positron emission tomography (PET) to visualize distinct molecules and molecular mechanisms in a living organism. Modeling of pharmacokinetic processes and quantitative analysis of data ascertain an optimal usage of PET in preclinical and clinical research.				
	PET is multi-disciplinary, so that the scholar has the opportunity to experience collaborative research and teamwork among various disciplines from chemistry, physics, engineering and mathematics to biology and (pre)clinical research.				
	The hosting group "Molecular Neuroimaging" comprises a physicis biologist, four physicians and several technicians. Currently, the working group operates a combined PET, CT and SPECT scanner small animal imaging as well as laboratory facilities for in vitro techniques (e.g. autoradiography) and extensive analytical process as parts of PET imaging studies. Clinical PET and MRI scanners a available as well. Depending on the duration of the scholarship, the student will be involved in PET imaging procedures and concomitant experiments electro-encephalography or in vitro experiments) as well as data analysis.				
	juelich.de/inm/inm	-2/EN/Hom	at the institute's webpa e/home_node.html) or r t.kroll@fz-juelich.de.		

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Complex Systems	Dr. Thorsten Auth	1	Physics, Chemistry, Biology	M, P
Time frame:	1 May to 31 Augus	st		
Institute's focal research areas	mediated interaction of particles at liquinattached to lipid-bin mediated interaction point of view. Example to the area of study of the program package program such as of project and the work the area of study of the program such as of the program of the work the area of study of the program such as of the project and the work the project and the project a	ons betwee d-gas interf layer membons that are mples are vection of nare ooint of view d using trial. Surface Evuage is not of Linux, basignuplot are ork plan for the application. N/AboutUs/	organizational_structu	her be interactions particles that are set are membrane-from a biological of parasites into a sell membranes. sely related and will employ the ledge of a elpful. However, of a plotting set. The details of the ested according to

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)	
Central Institute for Engineering, Electronics and Analytics, Electronic Systems (ZEA-2)	DrIng. Gudrun Wagenknecht	2	Informatics; Electrical / Biomedical Engineering; Mathematics; Physics	B, M, P	
Time frame:	May – December				
Institute's focal research areas	The research group Multimodal Image Processing at ZEA-2 focuses on the development of algorithms for segmenting and analyzing 3D head and brain structures of humans and small animals based on multimodal images (MR-BrainPET, MRI, CT, PET, SPECT). The algorithms are used to improve imaging procedures and the diagnosis of brain diseases (e.g., Alzheimer's disease). We are partners in third partyfunded research projects (e.g., HVF). Small projects regarding the following topics can be offered for students with background in medical image processing and outstanding programming skills in C, C++: 1. Implementation of algorithms in the field of head and brain segmentation. 2. Comparison and evaluation of new approaches for special applications. More information under http://www.fz-juelich.de/zea/zea-2/DE/Home/home_node.html				

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Jülich Centre for Neutron Science, JCNS-2 & PGI-4	Dr. B. Klobes	1	Physics, Materials Science programming basics	B, M, P
			are an asset	
Time frame:	May – 14th Decen	nber		
Institute's focal research areas	related materials a research group "La headed by Prof. Do characterisation to resonant ultrasour are used to characterisation to resonant ultrasour are used to characterised temporary scholar. • Elastic profit emporary scholar. • Measurem based allowed and the second of the secon	are among to attice Dynamics. R. Herman sechniques, each spectrosecterize energiates. Since by ship, several spectrosecterize of Since of the several section of the several section of function of function of the section of function of the section of the section of the section of function of the section of	n as thermoelectrics an he main topics of the ymics in Emerging Fundann. Both standard and e.g. Mössbauer spectrocopy (RUS) and transpigy related materials. In aplementary insight into the techniques are verial projects could be entitled in the first of the determination of espective Master- or Philipi-4/EN/Home/home_negi-4/EN/EN/EN/EN/EN/EN/EN/EN/EN/EN/EN/EN/EN/	oung investigator stional Materials" advanced becopy (MS), sort measurements a particular, MS and a structural and y well suited for a visaged: igh temperatures moelectric PbTe ased thin films using fron oxides or or Sb based elastic moduli D-thesis are also

University of Cologne (KL)

The University of Cologne was founded in 1388 and is one of the oldest and largest universities in Germany. The six faculties offer students a wide range of subjects as well as a great variety in choice and combination of courses and disciplines. The University of Cologne is popular not only due to the diversity of academic opportunities but also to the unique atmosphere of Cologne itself. Also by tradition, the university is internationally oriented and cooperates closely with people and institutions worldwide. The internationalization of teaching and research can be seen through joint programs with universities and colleges from abroad, double degree programmes, graduate schools, summer schools, short-time programmes, the binding of the (German and international) alumni. An important aspect of the strong international position of our university is the recruitment of qualified international students. Students who expect and fulfil high standards at the university, will find best studying conditions here.

In 2012, the University of Cologne was distinguished by the German Excellence Initiative, and now belongs to the small group of elite universities in Germany.

The University of Cologne offers German language courses for international students. They are taught by our Language as a Foreign Language Department. For the target group of this programme we would recommend the participation in the pre-semester intensive language courses which take place in March respectively September. These courses are offered also for beginners' level, their duration is of 3 to 4 weeks; in case of successful completion participants can obtain credit points. The registration for the course takes place through the International Office of the University.

www.uni-koeln.de

Contact: Dr. Stefan Bildhauer (Mr.) /

Daniela Simut-Perent, M.A. (Ms.)

Universitaet zu Koeln

Albertus-Magnus-Platz; 50923 Koeln

Tel. +49 221 470 - 2382; or -1340

s.bildhauer@verw.uni-koeln.de d.simut@verw.uni-koeln.de

KL 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute for international and foreign Private Law	Prof. Dr. Heinz- Peter Mansel	1	Law	В, М
Time frame:	May – July; September – Dece	ember		
Institute's focal research areas	numerous institute examination in Ge Germany. From in faculty has an outs teaching and pract a large number of university law libra. The main research. Internation. European. Comparat. the German within the foreign I romanique legal sy	es, it prepar rman law, we dustrial and standing reptice. The faspecialized uries in German areas area	and 4.000 registered students for the which is a prerequisite of social law to commendation in all fields of locality offers facilities for institutes with libraries many, and very good local law decomposed and Procedural Law decomposed and the Law of Civil Personal the law of the angione all the italian law, that the second particularly the turning the students of the second law, the second law	first state to a legal career in cial and tax law, the egal research, studying, including s, one of the largest f facilities. Procedure lo-american and the he legal systems of

KL 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
History Seminar	Prof. Dr. Werner Eck	2	Classics; Ancient History; Classical Archaeology	B, M, P
Time frame:	Juli – October			
Institute's focal research areas	Ancient History - Roman Empire - History of the Roman Provinces - Epigraphy			

KL 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department of Criminal Law and Criminal Procedure Law	Prof. Dr. Martin Wassmer	1	Criminal Law; Criminal Procedure Law	B, M, P
Time frame:	May - December			
Institute's focal research areas	The research unit deals with the entire criminal law and criminal procedure law, with a focus on white collar crime, criminal tax law, administrative criminal law, European criminal law and medical criminal law. This can be the areas of work of the scholars.			

University of Muenster (MS)

The University of Muenster (WWU Muenster) has developed a strong research profile in natural sciences, the humanities, medicine, law and business administration. The WWU Muenster is one of the biggest universities in Germany and has 15 Departments in 7 Faculties. Founded in 1780, the WWU is also a university with a long tradition in teaching and research.

http://www.uni-muenster.de/en/

The WWU offers intensive German language courses at the language center of the university. These courses are open to exchange students and scholars, but they require a participation fee. Intensive courses will take place in February / March (August / September for the second term) 2013. Regular courses are expected to take place between the beginning of April 2013 until mid July 2013 and beginning of September 2013 for the second term. (http://spz.uni-muenster.de/v).

German as a foreign language ("Deutsch als Fremdsprache" – DAF) is offered every semester from grades A1-C1 in our language centre ("Sprachenzentrum"). For grant holders via this program, intensive courses with 4 h/day on 2 weeks are offered before the start of the semester. Subsequently, courses during the semester are continuously offered with different intensities (2/2/4/8h / week).

Contacts: Elisabeth Schattke / Marejke Baethge

International Office

Westfaelische Wilhelms-Universitaet Muenster, Schlossplatz 3, 49149 Muenster, Germany

Phone: +49 251/83-22459 or +49 251/83-22255

Email: elisabeth.schattke@wwu.de;

marejke.baethge@wwu.de

MS 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Physics	Prof. Dr. Helmut Zacharias	1	Physical chemistry, nanoscience	М
Time frame:	May - December			
Institute's focal research areas	Self-organization, functional organic films.			

MS 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Physics	Prof. Dr. Helmut Zacharias	1	Laser science	В, М
Time frame:	May - December			
Institute's focal research areas	Femtosecond coherent soft x-ray radiation; two-photon photoemission spectroscopy.			

MS 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Institute of Materials Physics	PD Dr. Sergiy Divinski,	1	Material Physics, Diffusion-process	В, М
Time frame:	May - December			
Institute's focal research areas	Measurements on diffusion in nanocrystalline materials, determination of calorimetric effects during heating of the highly plastically deformed materials			

MS 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Center for Eastern Mediterranean Studies	Dr. Nikola Moustakis	3	Religious Studies, Jewish Studies, Coptic Studies, Ancient History; Archaeology; Oriental Studies	B, M, P
Time frame:	May - December			
Institute's focal research areas	The focus of research is on religious, historical, cultural, social and economic themes concerning the ancient Eastern Mediterranean region.			

#MS 5

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Institute for Evolution	Prof. Dr. Erich Bornberg-Bauer	2	Computational	M, P
and Biodiversity			Biology,	
			Biophysics	
Time frame:	May – December			
Institute's focal research areas	Students will be integrated in the ongoing research programmes of the group which involve both computational and experimental projects on protein and genome evolution. Currently, these deal with the questions of functional and structural promiscuity and their role in transitions between protein families, the evolution of transcription factor families and genetic networks, the modular (domain-wise) rearrangements of proteins and the de novo emergence of novel proteins from previously noncoding DNA and their possible adaptive benefits. For further information please visit: www.bornberglab.org			

University of Paderborn (PB)

The University of Paderborn is a fully accredited state university offering all types of academic degrees including PhD and postdoctoral lecture qualification.

The university has an academic staff of about 1.000 and offers a wide range of subjects in five faculties: Faculty of Arts and Humanities, Faculty of Business Administration and Economics, Faculty of Science, Faculty of Mechanical Engineering, Faculty of Computer Science, Electrical Engineering and Mathematics.

There are about 19.500 students studying at the university, among them about 1500 international students.

The city of Paderborn can look back on 1,200 years of history It is also home to some of the world's leading industrial corporations, such as Siemens, Wincor Nixdorf, Benteler, Hella und Stute. Located in the heart of Germany, Paderborn is an ideal base for getting to know the country and its people.

With a population of around 140,000 people, Paderborn is a lively cultural centre— among others the world's largest computer museum —and a generous range of sports and recreational activities, and of course, Paderborn has loads of city fetes and festivals.

www.uni-paderborn.de

German Language courses: A four week course of 20 hours per week starts before the semester begins in March and in September. Another course of 10 hours per week runs during the semester.

Contact: Angelika Brebeck

Universitaet Paderborn / International Office Warburger Str. 100; D–33098 Paderborn

Phone: +49-(0)5251/60 32 08 Email: <u>brebeck@zv.upb.de</u>

PB 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Department of Communications Engineering	Prof. Dr. Reinhold Häb- Umbach	1	Electrical engineering or computer science	М
Time frame:	Mai – August 2014			
Institute's focal research areas	Multi-microphone speech enhancement, in particular blind speech separation. A concrete master thesis topic could be the estimation of the number of active speakers in a speech mixture using statistical methods such as the Expectation-Maximization algorithm.			

PB 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Chair of Mechatronics and Dynamics	Dr. Tobias Hemsel	2	Mechanical Engineering, Electrical Engineering, Mechatronics	M, P
Time frame:	May - December			
Institute's focal research areas	Theoretical and experimental work in following fields: Sensors and Actuators, Dynamics of Mechatronic Systems, Reliability, Nonlinear Dynamic Systems more info at http://mb.uni-paderborn.de/en/mud			

PB 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P= PhD)
GET Lab – Cognitive Systems Engineering	Prof. Dr. Baerbel Mertsching	3	Computer Science, Electrical Engineering and related fields	M, P
Time frame:	May - December, preferably from October on			

Institute's focal research areas	-	autonomous and teleoperated mobile robot systems,
4.545	-	computer vision
	-	virtual and augmented reality/ simulation
	-	(low power) microelectronics

PB 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Department of Physics	Prof. Dr. Arno Schindlmayr	1	Theoretical Physics, Applied Mathematics	M, P
Time frame:	12 Weeks between 1 September and 31 December 2014			
Institute's focal research areas	Within the field of theoretical solid-state physics, the focus of our research is the development and application of ab initio methods to investigate the electronic structure and excitation spectra of solids without adjustable parameters. Our principal techniques are density-functional theory and many-body perturbation theory, which is based on Green functions. With these methods, the electronic, optical and magnetic properties of a material can be predicted using only fundamental quantum mechanics and the chemical composition of the material in question. We are particularly interested in the effects of correlation on the electronic band structure and in the accurate description of collective excitations, such as plasmons, excitons and magnons. Within a research project, candidates could make use of these techniques and the available computer codes for quantitative simulations of technologically interesting materials. Another important activity is the formal theory development with the aims of analysing the influence of common approximations and of improving the internal consistency of practical implementations as well as the conformance with known exact relations. For this purpose the methods are applied to model systems that can be studied either analytically or with the support of standard numerical computer software. This offers a variety of possible short-term projects for candidates with a background of theoretical solid-state or molecular physics, many-body quantum mechanics or applied mathematics.			

University of Wuppertal (WU)

Bergische Universität Wuppertal / The University of Wuppertal, Germany

The University of Wuppertal, founded in 1972, is one of the state universities in North Rhine-Westphalia (NRW), which is economically the most significant German state with an outstanding educational and cultural landscape. The city of Wuppertal, situated close to Düsseldorf and Cologne in a particularly delightful region with wooded hills, meadows, orchards and fields, called the "Bergisches Land", is an interesting mixture of outgoing metropolis and cosy village with a lot of leisure facilities. From any part of the city it is only a 10 minute walk to the nearest park or shady woodland path.

https://www.wuppertal.de/microsite/en/index.php

The University of Wuppertal towers over the city. The main campus enjoys a panoramic view across the town – a perfect environment for developing inspiring ideas and academic projects that will shape the future. Some 18.000 students from more than 100 countries benefit from our high-level academic approaches in teaching, and the university's commitment to research and international collaboration. Wuppertal University offers a diverse range of programs in science, engineering economics and the humanities, as well as educational science, design and architecture. Our academic culture is marked by diversity, experience and innovation.

Study in Germany - Join us in Wuppertal!

http://www.internationales.uni-wuppertal.de/en/incoming/international-students.html

www.uni-wuppertal.de

Our Language Center (SLI - <u>www.sli.uni-wuppertal.de</u>) offers the following courses of German as a foreign language:

•Intensive German Courses

Levels: A1(beginners) to C1b (advanced). Weekdays daily

•Lecture course "German Grammar" (Level: B2 upward), 2 hours per week

•German for Business and Economics (Level: advanced), 2 hours per week

•German for Humanities and Social Sciences

(Level: advanced), 2 hours per week
•German for Science and Technology
(Level: advanced), 2 hours per week

Contact: Andrea Bieck

Head of International Office

Bergische Universitaet Wuppertal Gauss-Str. 20, D – 42097 Wuppertal

Phone: +49 (0) 202 439 2181 / Fax: +49 (0) 202 4393856

Email: bieck@uni-wuppertal.de

www.internationales.uni-wuppertal.de

WU 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Center for International Studies in Social Policy and Social Services	Prof. Dr. Heinz Suenker	4	Social Sciences, Education, Social Policy, Social Work	M, P
Time frame:	May to July or October to December			
Institute's focal research areas	The center deals with theory, politics and practices in political and welfare institutions, in education and social services. We offer a broad range of topics with respect to comparative questions.			

WU 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Faculty of Mathematics and Natural Science – Section Physics	Martin Kaufmann	2	Physics, Mathematics	M, P
Time frame:	to be agreed upon			
Institute's focal research areas	Modeling of airglow phenomena Specification and characterization of a spectrometer for the observation of nightglow in Earth atmosphere. This spectrometer should operate from the ground and on a nano satellite built by students.			

WU 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Research group Experimental Particle Physics	Prof. Dr. Wolfgang Wagner	1	Physics	B, M
Time frame:	May 1 to July 31 or September 1 to November 30			
Institute's focal research areas	Elementary particle physics research with the ATLAS detector at the LHC (CERN); choose from 2 projects: a) data analysis in top quark physics, b) work on detector control system of the ATLAS pixel detector (digital electronics or embedded programing).			