



## Scholarship Programme of the German State of North Rhine-Westphalia for students from the Palestinian Territories

### Call 2020

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

*Please choose the scholarship place(s) you seek to apply for;  
fill in the online registration form and submit it online.*

*Please consider the time frames offered by the host universities.*

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## University of Aachen (RWTH)

Building on its interdisciplinary scientific culture, RWTH Aachen University has committed itself to contributing to solving the grand challenges of our time. To this end, RWTH will continue to undertake groundbreaking, responsible research and further enhance the quality and international visibility of its research output. By implementing a wide range of digital teaching and learning concepts, RWTH will open up new dimensions in university teaching and create a new generation of highly qualified graduates. In addition to research and teaching, RWTH will enforce innovation as a third pillar of its academic mission. The University sets out to develop into an internationally recognized hub for creative, bright minds, promoting young talents in an environment conducive to learning and working. It will provide fair opportunities and career paths in a diverse, globally connected workplace. In all its endeavors, RWTH strives to become – and continue to be – an excellent university with international visibility. With over 260 academic institutes organized in nine faculties, RWTH Aachen University is among the leading European institutions of higher education and scientific research. Currently, more than 45,000 students are registered in at least one of the 175 study programs that the university offers. Among these students more than 10,000 internationals have joined us from 125 different countries.

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#1	RWTH Aachen University			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Institut für katholische Theologie	Prof.vertr. Dr. Patrick Becker patrick.becker@kt.rwth-aachen.de 0241-80-96024	1	Religious studies; Theology; Development studies	M; Ph.D.
<b>Time frame:</b>	all year			
<b>Institute's focal research areas</b>	<p>The Institute of Theology focuses on the analysis of global development processes and their cultural and religious impact. Thus it is necessary to reflect the religious values and beliefs of the individual, which influence people's actions and therefore their environment. Possible questions for further research could be:</p> <ul style="list-style-type: none"> <li>- How do religious values hamper and encourage the implementation of the United Nation's Sustainable Development Goals?</li> <li>- How do religious actors use (social) media in order to influence their communities? What chances and risks correlate with this usage?</li> <li>- How do religious values influence migration and integration into a society?</li> </ul> <p>Of particular interest to the institute is the relationship between religion and politics in Europe and the Near East. In the wake of the Arab Spring, social transformations in the Near East have opened up new possibilities for development, but have reached cultural limits when it comes to redefining the role of religious institutions and authorities. Possible questions for further research could be:</p> <ul style="list-style-type: none"> <li>- How can the relationship between politics and religion be (newly) determined in a particular country?</li> <li>- Which models of cooperation between state institutions and religious communities can be thought of?</li> <li>- Which forms of religious dialogue exist and how can they strengthen social cohesion?</li> </ul>			

#2	<i>RWTH Aachen University</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Didactics of Social Sciences	Prof. Dr. Christian Kuchler kuchler@ipw.rwth-aachen.de +49 (0)241 / 80–25442	1	Translation History Education German language knowledge required	B/M Translation B/M/P History
<b>Time frame:</b>	August-December 2020			
<b>Institute's focal research areas</b>	The research project focusses on the use of international historical newspapers in history education. The fellow student would be involved in the translation/analysis of international historical newspapers for educational purposes. In addition, the fellow student would do background research on the history of the press in different countries.			

#3	<i>RWTH Aachen University</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
III. Physical Institut	Prof. Stefan Roth roth@physik.rwth-aachen.de +49 241 80 27296	1	Physik	M, P
<b>Time frame:</b>	Mai-December 2020			
<b>Institute's focal research areas</b>	The internship could be done in one of the following projects: - Construction of a monitoring drift chamber for the T2K-Experiment at J-PARC (Japan) - Silicon-Strip detectors for the CMS experiment at CERN (Switzerland) - Development of a neutron detector for radiography			

## Bielefeld University

Bielefeld University was founded in 1969 with an explicit research assignment and a mission to provide high-quality research-oriented teaching. With far-reaching aims to reform nearly every area of higher education, the University has made valuable contributions to educational reform in Germany and upholds its interdisciplinary, innovative and reform-oriented character to this day. The University encompasses 13 faculties covering a broad spectrum of disciplines in the humanities, natural sciences, social sciences, and technology. With more than 24,000 students in 115 degree courses and around 2,750 staff members (including 269 professors and lecturers as well as 1,390 academic staff) it is one of Germany's medium-sized universities.

Bielefeld - the "university of short ways" and of "interdisciplinary intertwinement"! Whereas elsewhere the departments and institutes are spread all over the city, Bielefeld University is a campus university. Thanks to this compactness, the disciplines are very close to one another and lots of opportunities for interdisciplinary encounter arise. There is even a special-purpose Center for Interdisciplinary Research, the "ZiF."

The I2SoS is an interdisciplinary Institute that is devoted to reflecting on science: scientific method, social epistemology, the impact of science on society, social influences on sciences, economic incentives and their effects on science, science and technology, science and economic development, ethics of science, medical ethics, history of science. The overall focus is on the relation between science and society.

<http://www.uni-bielefeld.de/%28en%29/i2sos/index.html>

Visiting students can take part in all classes in philosophy, history, and economics unless access is restricted (restrictions may apply to economics classes). Accordingly, visiting students are not confined to science-related studies. However, the odds of acceptance are better for students with interests in such studies. The master's program "History, Economics and Philosophy of Science" offers English-language classes (<http://www.uni-bielefeld.de/i2sos/heps/international/index.html>).

Bielefeld University offers the opportunity of taking a German language course at "PunktUm". Intensive courses (20-30 lessons/week) in March, August and September (before the lecture periods). Courses with four lessons/week during the lecture periods. For more information see: <http://www.uni-bielefeld.de/punktum>

[www.uni-bielefeld.de](http://www.uni-bielefeld.de)

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<b>#1</b>		<b>Bielefeld University</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute for Interdisciplinary Studies of Science (I2SoS)	Prof. Dr. Martin Carrier	1	Philosophy of Science, History of Science, Sociology of Science, Economics of Scientific Knowledge, Medical Ethics	M,P
<b>Time frame:</b>				
<b>Institute's focal research areas</b>		Philosophy of Science, History of Science, Sociology of Science, Economics of Scientific Knowledge, Medical Ethics		

<b>#2</b>		<b>Bielefeld University</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Faculty of Physics	Prof. Dr. Armin Götzhäuser ag@uni-bielefeld.de Tel. +49 521 106-5362	1	Physics, Chemistry	M,B
<b>Time frame:</b> April-December 2020				
<b>Institute's focal research areas</b>		Supramolecular Physics Carbon Nanomembranes Membrane Characterization Helium Ion Microscopy		

## **Bielefeld University of Applied Sciences**

Five Faculties: Design, Architecture and Civil Engineering and Technology, Engineering and Mathematics, Social Sciences, Business and Health.

Courses are mainly in German (language of instruction)

About 10,000 students enrolled, including approximately 800 international students.

During the *freshers' weeks* (01—29- September 2019) German language courses for guest students are organized for all levels. During the lecture time German courses are not necessarily for all levels available.

During the semester, the Faculty of Business and Health offers German Courses with the proficiency levels A1, A2, B1, B2, C1 as part of their curricula.

Summer term 2019: 1 April -14 June 2019

Winter term 19/20: 30 September '19 - 10 January '20

**Important information:** In order to benefit from all services the university has to offer (Bus ticket, wifi access, library ID etc.), we generally recommend that scholarship students should be enrolled at our institution for their stay. For technical purposes, this is only possible until 15 November (winter term) or 15 May (summer term). We recommend a scholarship start before these dates.

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

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#1	<i>University of applied science Bielefeld</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
	Prof. Dr.-Ing. Johannes Weing +49-571 71195 johannes.weing@ fh- bielefeld.de	1	Civil Engineering or Architecture	- B Architecture - B Civil Engineering - M Architecture - M Civil Engineering (classes only in German language)
<b>Time frame:</b>	09.03 - 17.07.2020 (3 months) or 07.09. – 31.12.2020			
<b>Institute's focal research areas</b>	<p>Important: Scholarship holders should have previous knowledge in German language</p> <ul style="list-style-type: none"> <li>- Surveying methods and skills</li> <li>- Construction of plain light buildings (e.g. sports halls or stadiums)</li> <li>- Water engineering and water management</li> <li>- Micro- and ultra-filtration methods</li> <li>- Construction, Energy, Environment: <ul style="list-style-type: none"> <li>- water engineering including water preparation</li> <li>- energetic building restoration with alternative energy concepts</li> </ul> </li> </ul>			

## Ruhr-University Bochum

Ruhr University Bochum (RUB), about 43,000 students, more than 4,000 foreign students; is a modern and innovative university with a wide range of study courses and excellent research institutions, located in one of the most culturally interesting regions in the heart of Europe.

University homepage: [www.rub.de](http://www.rub.de)

German language classes at RUB start in April (summer term) and October (winter term) each year, they are free of charge: <http://www.daf.ruhr-uni-bochum.de>

International Office: [www.international.rub.de](http://www.international.rub.de)

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#1	Ruhr-University Bochum			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Middle Eastern and Islamic Studies	Prof. Dr. Johann Büssow, johann.buessow@rub.de	1	Middle Eastern Studies, Jewish/Israel Studies, History, Social Anthropology, Political Science, Cultural Studies	M, PhD
<b>Time frame:</b>	During the lecture periods 2020: 2 May-17 July 2020; 12 October-23 December 2020			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- History of the modern Middle East (18th-20th centuries),</li> <li>- History of the Ottoman Empire,</li> <li>- History of Syria,</li> <li>- History of Palestine and the Palestinians,</li> <li>- History of Oman;</li> <li>- Urban history;</li> <li>- History of rural communities, especially the Bedouins;</li> <li>- History of concepts and Historical Semantics;</li> <li>- Intellectual history of the modern Islamic World.</li> </ul>			

#2	Ruhr-University Bochum			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Chair for Tunnelling and Construction Management	Annika Jodehl, M.Sc. annika.jodehl@rub.de +49 (0)234 32-21412	1	Civil Engineering / Environmental Engineering / Geosciences  PC knowledge (MS Office) necessary.	M,P
<b>Time frame:</b>	October – December (01.10.2020 – 20.12.2020)			
<b>Institute's focal research areas</b>	soil conditioning for EPB and slurry shields (tunneling), process simulation, cost-risk analysis, shotcrete laboratory experiments, tunnel safety, separation of used slurries			

<b>#3</b>		<b>Ruhr-University Bochum</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Department of History	Prof. Dr. Markus Koller, Chair in History of the Ottoman Empire and Modern Turkey, markus.koller@rub.de	1	History	M, P
<b>Time frame:</b>	May - July 2020			
<b>Institute's focal research areas</b>	Ottoman History, Mediterranean History			

<b>#4</b>		<b>Ruhr-University Bochum</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute for Philosophy II	Prof. Dr. Albert Newen	1	Theoretical Philosophy: Mind, Logic, Language, Epistemology, Experimental Philosophy, Ancient Philosophy	Master Philosophy (Courses are in English or German)
<b>Time frame:</b>	April bis Dezember 2020			
<b>Institute's focal research areas</b>	The institute is specialized in Philosophy of Language, Mind and Science. It is also offering Logic and Epistemology as well as Ancient Philosophy			

#5	Ruhr-University Bochum			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Philosophy and/or Research Group "Memory" and/or Center for Mind & Cognition	Prof. Dr. Markus Werning, Chair of Philosophy of Language and Cognition Department of Philosophy, Ruhr University Bochum 44780 Bochum, Germany markus.werning@rub.de	1	Philosophy Cognitive Science Linguistics	B M PhD
<b>Time frame:</b>	May-July or September-December			
<b>Institute's focal research areas</b>	Topics: Philosophy of Language and Mind, Epistemology, Semantics, Pragmatics, Memory Research Methods: Concepts, Bayesian Models, EEG, Computational Modelling			

#6	Ruhr-University Bochum			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Institute of Geology, Mineralogy & Geophysics, Chair for Applied Geology / Hydrogeology	Prof. Dr. Stefan Wohnlich	1	Hydrogeology	M PhD
<b>Time frame:</b>	2 May – 15 July 2020 or 1 September – 30 November 2020			
<b>Institute's focal research areas</b>	<p>HYDROGEOLOGY</p> <p>To enhance our understanding of flow, chemical reactions and transport in groundwater, we teach, develop and perform numerical, field and laboratory studies. The latter aim at investigating methods, which allow for better monitoring and prediction of processes in groundwater. Our research contributes to the ongoing challenge of managing sustainable use of groundwater and aquifers.</p> <p>The applicant will be involved in active research groups, dealing with groundwater related scientific projects such as:</p> <ul style="list-style-type: none"> <li>• Groundwater contamination in urban areas</li> <li>• Nitrate contamination in rural areas</li> <li>• Developing new groundwater models</li> <li>• Hydro chemical analyses</li> <li>• Field experiments</li> <li>• Acid mine drainage</li> <li>• Groundwater management in mining areas</li> </ul>			

## **Bonn-Rhein-Sieg University of Applied Sciences**

The Bonn-Rhein-Sieg University of Applied Sciences (Hochschule Bonn-Rhein-Sieg - HBRS) was established in 1995 as a national university funded by the government. Traditionally, HBRS attracts applicants from the within its region, but the University has formal and informal cooperation agreements with more than 70 universities throughout the world.

HBRS specializes in business administration, natural sciences, computer science, social security management, technical journalism and engineering. The focus areas for HBRS 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.

The campuses in Sankt Augustin, Rheinbach and Hennef are well-equipped with modern laboratories, and technical equipment. HBRS has approximately 150 Professors of which many receive research grants. There are about 200 support staff including technical and administrative employees. HBRS currently has around 8000 students and the Department of Natural Sciences recruits approx. 140 undergraduates in Bachelor programs and approx. 30 students in a Master program each year in the study courses Applied Biology (as an international study course) and Chemistry with Material Sciences (as a German study course), amongst others.

Very recently, a new Master program was started in "Material Science and Sustainability Methods" focusing on the development of novel advanced materials for automobile and packaging industry as well as biomedicine and tissue engineering. Teaching languages are German and English (50/50). Students will be involved in research projects including material synthesis, analysis and testing.

Due to the time frame, participation at the regular semester German courses is unfortunately not possible.

[www.h-brs.de](http://www.h-brs.de)

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#1	Hochschule Bonn-Rhein-Sieg (HBRS) University of Applied Sciences			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Natural Sciences	Prof. Dr. Margit Schulze, Organic and Polymer Chemistry	1	Chemistry / Material Science	B, M, P
<b>Time frame:</b>	Arrival: June 1st or July 1st or August 1st 2020, minimum stay: 12 weeks			
<b>Institute's focal research areas</b>	<p>The work deals with:</p> <p>a) development of polymer scaffolds for stem cell differentiation and proliferation</p> <p>b) development of polymers used in regenerative medicine (tissue engineering and drug release)</p> <p>c) development of polymeric materials from renewable resources (biomass)</p> <p>The work encompasses the following topics for potential scholarship holder:</p> <ul style="list-style-type: none"> <li>• Synthesis of appropriate polymers (e.g. biopolymers such as microspheres and hydrogels)</li> <li>• Characterization of polymer structure</li> <li>• Surface modification / functionalization</li> <li>• Bioactivation of the scaffolds (e.g. ligand coupling)</li> <li>• Biocompatibility testing</li> </ul>			

#2	<i>Hochschule Bonn-Rhein-Sieg (HBRS) University of Applied Sciences</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Natural Sciences	Prof. Dr. Edda Tobiasch	1	Biology	M, P
<b>Time frame:</b>	Arrival: First days of July, August or September 2020, minimum stay: 10 weeks			
<b>Institute's focal research areas</b>	<p>The work deals with human stem cell differentiation and their signalling pathways.</p> <p>Overview:</p> <p>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.</p> <p>Human mesenchymal stem cells which are isolated from adipose tissue have the advantage of potential autologous transplantation ability. There is strong evidence that they can be differentiated in various lineages such as the chondrogenic, osteogenic, adipogenic and myogenic direction. Inductions of the cells into multiple lineages as well as their use in the undifferentiated state already resulted phase I to III clinical studies for various diseases all over the world.</p> <p>We aim at investigating fat-derived MSC, as potential donor cells, for their ability to differentiate in the osteogenic lineage for future treatment of critical size bone defects, as well as osteoporosis (key word: drug targets).</p> <p>We also differentiate the stem cells in the adipogenic direction to develop an in vitro model for the onset of atherosclerosis and towards endothelial and smooth muscle cell for a better understanding of angiogenesis.</p> <p>In another project ecto-mesenchymal stem cells derived from dental follicles of wisdom teeth are used to find strategies improving dental implant stability.</p> <p>Other studies involve iPS cells, purinergic receptors and Hox genes for the characterization of stem cells derived from various human body parts during differentiation to find the best suitable cells and tissues for each differentiation lineage.</p> <p>Other information can be found on the homepage:  <a href="https://www.h-brs.de/en/prof-dr-edda-tobiasch-0">https://www.h-brs.de/en/prof-dr-edda-tobiasch-0</a></p> <p>The work encompasses the following topics for potential scholarship holder:</p> <ul style="list-style-type: none"> <li>-Differentiation and characterization of adult, human mesenchymal stem cells</li> <li>-Determination of the role of the differentiating adipocyte in an in vitro model of stenosis</li> <li>-Investigation of purinergic receptors and Hox signalling and their role in human stem cell differentiation</li> <li>-Biocompatibility testing of nano-structured polymers as scaffolds for 3D tissue engineering</li> <li>-Stem cell interaction with natural and artificial scaffolds</li> </ul> <p>The group is composed of the lab leader, a scientist, four PhD students, and Master- and Bachelor students working on their theses. One of the PhD students will take care for the guest student.</p>			

## TU Dortmund University

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 WS15 /16 amounted to slightly more than 34.000. 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 program 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 program "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.

Please notice: there are no German language courses available this year.

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<b>#1</b>		<b>TU Dortmund University</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Chair of English Linguistics (Multilingualism), Faculty of Cultural Studies	Prof. Sarah Buschfeld, sarah.buschfeld@udo.edu, 0049 231 755 2888	1	English Linguistics, Multilingualism	M, PhD
<b>Time frame:</b>	September till June			
<b>Institute's focal research areas</b>	English Linguistics: Multilingualism; World Englishes; Language variation, contact, and change; Language Acquisition (First-, second-, bi-/multilingual acquisition)			

<b>#2</b>		<b>TU Dortmund University</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Chair of English Linguistics, Faculty of Culture Studies	Prof. Patricia Ronan, patricia.ronan@udo.edu, 0049 231 755 2904	1	English Linguistics, Celtic Linguistics	M, PhD
<b>Time frame:</b>	September till June			
<b>Institute's focal research areas</b>	English Linguistics: Language variation, Language contact, language change, multilingualism, language attitudes, language and identity Celtic Linguistics: Language contact, language change, multilingualism, grammar of Celtic, esp. Goidelic, languages.			

## **Dortmund University of Applied Sciences**

The Fachhochschule Dortmund - University of Applied Sciences and Arts was officially founded in 1971. Dortmund University of Applied Sciences and Arts is an academic institution with about 13500 students and more than 200 professors. It is the largest University of Applied Sciences in the Ruhr District. Studies contents focus on solving practical problems and performing tasks encountered in daily applications, with experienced professors ensuring a sound relationship between theory and practice. At present more than 13600 students are registered with the University of Applied Sciences and Arts of Dortmund. In all courses of studies, the internationally recognized Bachelor and Master degrees are awarded.

Faculties at the Fachhochschule Dortmund –University of Applied Sciences and Arts are:

- Architecture
- Design
- Information Technology and Electrical Engineering
- Computer Science
- Mechanical Engineering
- Social Sciences
- Business
- Information Technology

Under certain conditions there is a possibility to attend term-accompanying German courses offered by the Career Service of the FH Dortmund in cooperation with the Auslandsgesellschaft Intercultural Academy gGmbH Dortmund (B1 level). Attendance in the courses of the Career Service (B1 level) is only possible if the scholarship holder comes at the beginning of the semester and there are still free seats. In winter semester there is also possibility to attend German courses for English taught Master programmes (A1 level). If applicable we can also try to book a private course at VHS Dortmund. However, there is no guarantee for a German course.

**Contact:**

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#1	<i>Dortmund University of Applied Sciences</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Faculty of Mechanical Engineering (Machinenbau)	Prof. Dr. rer. nat. Tamara Appel	1	Mechanical Engineering	M
<b>Time frame:</b>	02.05.2020- 31.12.2020			
<b>Institute's focal research areas</b>	<p>The researching group at Fachhochschule Dortmund/ Dortmund University of Applied Sciences and Arts work on additive manufacturing for metal parts by selective laser melting (SLM). This highly sophisticated technique is one of the most challenging techniques known as 3D printing. The group works on the development of new materials for applications like medical implants, engines etc. The raw material powders need to be characterised in order to understand the influencing parameters for materials characteristics like corrosion resistance or mechanical stiffness. The applicant could work out 3D models which are of special interest within their homes university and print and characterise the finished products in Germany.</p>			

<b>#2</b>		<b>Dortmund University of Applied Sciences</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute for Digital Transformation of Application and Living Domains (IDAIL)	Prof. Dr. Carsten Wolff Otto-Hahn-Str. 23 44227 Dortmund OHS 23 EG 07 Carsten.wolff@fh-dortmund.de and Areej Aldaghamin areej.aldaghamin@fh-dortmund.de	1	Computer Science (and related) · Project Management	M, PhD
<b>Time frame:</b>	02.05.2020 - 31.12.2020			
<b>Institute's focal research areas</b>	<p>Joining research teams would be a valuable learning experience for students from the Palestine, especially given the added value they can offer in the fields of resource efficiency, energy management and sustainability upon returning to Palestine. The hosted students may join the research groups within running projects at the Institute for Digital Transformation of Application and Living Domains (IDAIL) or be part of a group of researchers within an international English-language Master's study programme. The research fields offered can be matched to the interests of the hosted students.</p> <p>Based on current projects, existing expertise and networks IDiAL is concentrating on the following application domains:</p> <ul style="list-style-type: none"> <li>· Health and Demographic Change</li> <li>· Logistics and Robotics</li> <li>· Resource Efficiency and Sustainable Energy</li> <li>· Mobility and Infrastructure</li> <li>· Process and Tool Development</li> </ul> <p>For more information about ongoing research in IDiAL, please follow this link: <a href="https://www.fh-dortmund.de/en/idual/forschung/forschungsprojekte.php">https://www.fh-dortmund.de/en/idual/forschung/forschungsprojekte.php</a></p> <p>The hosted students also have the opportunity to work in international research teams of students enrolled in our two international English-taught Master programmes:</p> <p>1) Master Embedded Systems for Mechatronics (ESM)</p> <p>The Master Programme Embedded Systems for Mechatronics is delivering the knowledge and competencies to work in today's interdisciplinary engineering teams, e.g. in automotive, industrial automation, ICT, medical technology and other industries and to develop intelligent technical systems.</p>			

## Heinrich-Heine-University Duesseldorf

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 35000. 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](http://www.uni-duesseldorf.de)

Language Courses will be provided by the university. At the moment the planning for next year is not yet public. However, every non German speaking student can participate.

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<b>#1</b>		<b>Heinrich Heine University Düsseldorf</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute for Jewish Studies	Prof. Dr. Marion Aptroot aptroot@phil.hhu.de Tel. 81-13228	1	Yiddish Studies (including interdisciplinary studies)	B, M, P
<b>Time frame:</b>	May – December 2020			
<b>Institute's focal research areas</b>	Yiddish: Yiddish Language, Yiddish Literature and Culture, Yiddish Linguistics			

<b>#2</b>		<b>Heinrich Heine University Düsseldorf</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Condensed Matter Physics Laboratory www.softmatter.hhu.de	Prof. Dr. Stefan Egelhaaf +49 211 81-14325 stefan.egelhaaf@hhu.de	1	Physics, (Physical) Chemistry or neighboring subject, good command of English	B, M, P Physics, Chemistry, Chem. Engineering or neighboring subject
<b>Time frame:</b>	May – December 2020 after mutual agreement			
<b>Institute's focal research areas</b>	<p>Manipulating Colloidal Particles with Light</p> <p>Colloidal particles with a size of about a micron and suspended in a liquid undergo a random motion, so-called Brownian motion. Their motion can be manipulated using light. This allows us to trap and move individual particles without directly interfering with the sample. A share of the 2018 Nobel prize in Physics was awarded to Arthur Ashkin for developing this technique, known as optical tweezers. In our group, we exploit this possibility in several ways. For example, optical tweezers can be used to create specific particle arrangements. After the tweezers are deactivated, the particles move from their 'artificial' positions to their equilibrium positions. This motion can be followed by optical microscopy and subsequently analyzed quantitatively and systematically. Instead of the particle positions, also the particle dynamics can be modified by exposing the particles to extended, modulated light fields. Again, we observe the modification of the dynamics by modern microscopy and/or light scattering techniques. Out of this broad range of possibilities, together with the student we will select the project that appears most interesting and most promising to lead to exciting new results.</p>			

<b>#3</b>		<b>Heinrich Heine University Düsseldorf</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute for Quantitative Genetics and Genomics of Plants	Prof.Dr. Benjamin Stich	1	Agricultural Biology, Biology	B, M
<b>Time frame:</b>	April-August			
<b>Institute's focal research areas</b>	<p>Screening of multiple barley populations for agronomically relevant traits and statistical analyses of these data</p> <p>Our research</p> <p>Most traits of agronomic importance are quantitative traits, i.e. the phenotypic observations cannot be assigned to distinct classes but follow a continuous distribution. This is caused by a polygenic inheritance as well as the importance of genotype*environment interaction for such traits.</p> <p>The work of the Institute for Quantitative Genetics and Genomics of Plants aims to identify the causes of natural phenotypic variation of crop plants on a molecular level, in order to attain the ultimate goal of our work - the prediction of phenotypic performance under various environmental conditions. This requires combined efforts on creating novel plant material, exploiting the possibilities of *omics technologies, and developing innovative biostatistical procedures.</p>			

## University of Duisburg-Essen

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 %, 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.

[www.uni-duisburg-essen.de](http://www.uni-duisburg-essen.de)

<http://www.uni-due.de/international/>

For free German classes in preparation for one's studies see:

[www.uni-due.de/international/deutschkurse.shtml](http://www.uni-due.de/international/deutschkurse.shtml)

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#1	<i>University of Duisburg-Essen</i>			
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Faculty of Engineering Chair of Dynamics and Control	Dr. Sandra Rothe/Söffker, Prod. Dr. D.	1	Automation, AI, Robotics	Master
<b>Time frame:</b>	May 2020 – November 2020 Enrollment fees of 315 EUR will be charged twice if the stay exceeds one semester term. The costs for one semester are usually covered by the NRW short-term scholarship. Semester terms are: Sommer term: April 1, 2020 to September 30, 2020 Winter term: October 1, 2020 to March 31, 2020			
<b>Institute's focal research areas</b>	Tracking of a moving objects, like walking Human. This robotic task can serve towards many applications including mobile robots serving elderly people, mobile robots guiding museum visitors, mobile robots carrying airport passenger luggage.			

## Research Center Juelich

Forschungszentrum Jülich makes a vital contribution to solving major challenges facing society in the fields of information, energy, and bioeconomy. It focuses on the future of information technologies and information processing, complex processes in the human brain, the transformation of the energy system, and a sustainable bioeconomy.

Forschungszentrum Jülich develops simulation and data sciences as a key research method and makes use of large, often unique, scientific infrastructures. Its work spans a range of topics and disciplines and it exploits synergies between the research areas. With some 6,100 employees, Jülich—a member of the Helmholtz Association—is one of Europe's large research centres.

We believe that the key to solving global challenges, such as energy supply technologies or for information technologies of the future, is understanding materials. We investigate materials in the context of systems and processes on different scales, from the atomic to the global level. In this way, we embed our research in the wider context, taking into consideration not only scientific questions, but also social, economic, and ethical issues.

In cooperation with our partners, we develop and use key technologies, such as high-performance computing, to open the door to new applications. In this process, research questions and technological developments are inextricably linked with each other. We are involved in developing completely new industries, such as the bioeconomy, on the basis of our fundamental scientific research facilitated by our interdisciplinary and international approach.

About 6,100 employees, over 200 cooperation partners in Germany and abroad, a unique infrastructure, and unrivalled expertise in physics, materials science, nanotechnology, and information technology – this is the potential that we exploit in working with future key technologies to develop new solutions in the areas of energy and environment, information and brain research.

Excellent researchers who cooperate across the borders of institutes, research centres, and even countries are Jülich's greatest strength. In order to allow them to collaborate with leading partners throughout the world, Jülich participates in strategic alliances both in Germany and abroad.

Young scientists, undergraduates, and PhD students are central to the intellectually stimulating environment and vitality of the campus. Jülich offers them a working environment with state-of-the-art instruments and international contacts, as well as the opportunity to research independently at an early stage of their career.

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 facilitate breakthroughs to new horizons of knowledge. This infrastructure, valued and used by researchers throughout the world, characterizes Jülich as the home of key technologies.

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

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<b>#1</b>	<b>Forschungszentrum Jülich</b>			
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institute of Complex Systems, Forschungszentrum Jülich, 52425 Jülich	Dr. Thorsten Auth, email: t.auth@fz-juelich.de, phone: +49 2461 61 1735	1	Physics, Chemistry, Biology	B, M, P
<b>Time frame:</b>	2 May to 15 December 2020			
<b>Institute's focal research areas</b>	<p>Our institute works on the structure and dynamics of complex fluids, soft matter, and biological systems—from colloids and (bio)polymers to the motion of cells. Within the scholarship program, the student will perform numerical calculations to study interface-mediated interactions between particles: this can either be interactions between particles at fluid-gas interfaces or interactions of particles that are attached to lipid bilayer membranes. Our main interest are membrane-mediated interactions that are particularly important from a biological point of view. Examples are viral budding, the entry of parasites into cells, and the interaction of nanoparticles bound to cell membranes.</p> <p>Methodologically, calculations for particles at fluid interfaces and at lipid-bilayer membranes are closely related and can both be performed using triangulated surfaces. We will employ the freely available program package "Surface Evolver". Basic knowledge of Linux, bash scripting, a plotting program (e.g. gnuplot), and a programming language would be helpful, but are not required. The details of the project and the work plan for the student will be adjusted according to the area of study of the applicant.</p>			

## University of Cologne

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.

### *Department of Neuropathology, University Hospital of Cologne, Cologne, Germany*

The Dpt. of Neuropathology is responsible for clinical diagnosis of diseases of the nervous system by analysis of patients' samples (tumor biopsies, cerebrospinal fluid, muscle and nerve biopsies). In addition, we have a strong scientific impact in neuroimmunology/oncology. We study the pathogenesis of primary lymphoma of the central nervous system by analysis of patients' CNS lymphoma biopsies as well as in preclinical experimental murine models. Furthermore, we study the role of infectious agents in the pathogenesis of autoimmune inflammatory disorders of the nervous system. Finally, we are interested in the pathogenesis of inflammatory disorders of muscle and nerve which are addressed in patients' samples.

[www.uni-koeln.de](http://www.uni-koeln.de)

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<b>#1</b>	<b>University of Cologne</b>			
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Historisches Seminar/Alte Geschichte	Prof. Werner Eck	1	Ancient History	all
<b>Time frame:</b>				
<b>Institute's focal research areas</b>	Epigraphy and Archaeology in the Near East between Alexander and 7th century AD			

<b>#2</b>	<b>University of Cologne</b>			
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institut für Strafrecht und Strafprozessrecht Universität zu Köln Albertus-Magnus-Platz 50923 Köln	Prof. Dr. Dr. h.c. Martin Waßmer martin.wassmer@uni-koeln.de 0221 470 4060	1	Criminal Law; Criminal Procedure Law	
<b>Time frame:</b>	8 – 12 Wochen			
<b>Institute's focal research areas</b>	Criminal Law; Criminal Procedure Law			

## University of Muenster

The University of Muenster (WWU Münster) has developed a strong research profile in classical and ancient studies, natural sciences, the humanities, medicine, law and business administration. The WWU Münster 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. It targets top-level research in high-performance areas for and combines this with promoting first-class young researchers. WWU Münster has strong international activities with over 550 partner institutions around the world, with focus in Asia and Middle East, South America, and Europe. Its Welcome Center offers support for new arriving students and scientists, German language courses are regularly given in the Language Center without supplementary fees.

More information can be found at

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

The language center of the University of Münster offers language classes at different dates throughout the whole year. You will find more information on the dates and the requirements here: <http://spz.uni-muenster.de/en/daf>

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#1	<i>University of Muenster (WWU Münster)</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Institute of Applied Physics, Nonlinear Photonics group	Prof. Dr. Cornelia Denz, Director denz@uni-muenster.de Tel. +49 251 8333518 Fax. +49 251 8339811 <a href="http://www.nonlinear-photonics.de">http://www.nonlinear-photonics.de</a>	1	Physics/ Optics/ El. Engineering	Physics; Optics; El. Engineering (PhD or M students)
<b>Time frame:</b>	June – October 2020			
<b>Institute's focal research areas</b>	<p>Photonics – applications of optics in information processing, biology and medicine – has recently achieved a highly developed state that allows considering the actual century as the "century of the photon" that displaces the last century - the "century of the electron".</p> <p>Photonics is therefore one of the most promising technologies of the future, and driving motor for many industry applications of optical technologies which are nowadays already used e.g. in optical data storage as for CDs and DVDs, in optical illumination with LEDs or OLEDs, or in optical communication using optical fibers. Nonlinear optical effects allow amplifying, controlling, and steering light in order to realize complex information processing tasks. They require the understanding and control of nonlinear effects as well as tailoring light for the purpose of application. Using nonlinear optical processing features, we can use light as the carrier of information of the future.</p> <p>Our actual research activities are centered on this vision, based on two major focus lines - nonlinear optical applications in information, biology and medicine, and photonic circuits by light is guiding light.</p> <p>In this field, we are offering places for PhD students or Master students in the following fields:</p> <ul style="list-style-type: none"> <li>• Optimization of organic solar cells by surface structuring</li> <li>• Investigations of cell elasticity by optical tweezers</li> <li>• Development of tailored light fields for holographic optical trapping</li> <li>• Optical micro sensors for customized light fields</li> <li>• Realization of polymer structures by dielectrophoresis</li> <li>• Nonlinear light localization in photonic crystal structures</li> <li>• Nondiffracting and caustic beams as tools for photonic lattices</li> <li>• Nonlinear integrated optics by direct femtosecond laser writing</li> <li>• Nonlinear microscopy</li> </ul>			

## Muenster University of Applied Sciences

The FH Muenster – Muenster University of Applied Sciences was founded in 1971 out of public and private schools and has developed to a modern, achievement-oriented and science-oriented university.

FH Muenster is with around 15,000 students and 13 faculties/central research institutions one of the biggest institutions of its kind in Germany.

The departments and institutions are located at different places in Muenster and Steinfurt.

A special service for foreign students is offered to make students' life easier and to integrate them successfully into everyday life at the university (FHIRST – FH international Reception Service Team).

Internet: [www.fh-muenster.de](http://www.fh-muenster.de)

Language Courses from A2 - B2.

In cooperation with local language schools, flexible dates according to student's availability.

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#1	<i>Muenster University of Applied Sciences</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
FH Muenster - University of Applied Sciences Department of Mechanical Engineering Laboratory for Thermal and Power Engineering	Prof. Dr.-Ing. habil. Stefan aus der Wiesche FH Münster Stegerwaldstr. 39 48565 Steinfurt Tel: 02551 9 62272 wiesche@fh-muenster.de	1	Mechanical Engineering Good english language skills required.	B,M PhD possible (together with University of Paderborn)
<b>Time frame:</b>	01.09. – 31.12.2020			
<b>Institute's focal research areas</b>	<p>All research projects are dealing with fluid mechanics and heat transfer (both experimental and theoretical research). Every project is linked to a larger research project coordinated by PhD students and research assistants in the lab. The supervision and support of the students is fully ensured.</p> <p>The following projects are currently open for the present initiative:</p> <ul style="list-style-type: none"> <li>- Boiling heat transfer and investigation of microscale flow phenomena</li> <li>- Convective heat transfer from rotating disks</li> <li>- Flow separation and reattachment of a turbulent boundary layer</li> </ul> <p>Further information is available (see corresponding internet page of the lab: (<a href="https://en.fh-muenster.de/maschinenbau/labore/waermetchnik/waermetchnik.php">https://en.fh-muenster.de/maschinenbau/labore/waermetchnik/waermetchnik.php</a>))</p>			

## **Hochschule Niederrhein**

The Hochschule Niederrhein is one of the largest and top-performing universities for applied sciences in Germany. We open up perspectives, and with academic training that is geared to the future alongside problem-focused and transfer-oriented research, we ensure that our graduates are in demand on the labour market.

In the German university landscape we are a renowned educational and research institution. With ten faculties, campuses in Krefeld and Mönchengladbach and around 14,200 students, we are an important contact for companies from the region when it comes to research and transfer.

Our approximately 80 Bachelor's and Master's degree programmes cover a broad spectrum of subjects and are tailored to the needs of the region. The Krefeld South campus is the seat of the faculties of Electrical Engineering and Computer Science, Mechanical and Process Engineering, Industrial Engineering and Health Care. The faculties of Chemistry and Design are at home at the Krefeld West campus. Mönchengladbach is the seat of the Faculty of Business Administration and Economics, the largest faculty of the university, as well as the faculties of Food, Nutrition and Hospitality Sciences, Applied Social Sciences and Textile and Clothing Technology.

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<b>#1</b>		<b>Hochschule Niederrhein</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Competence Center eHealth	Lux, Prof. Dr. Thomas thomas.lux@hs-niederrhein.de	1	Software Engineering/Health Informatics Englisch B2.2	B, M
<b>Time frame:</b>	May-July			
<b>Institute's focal research areas</b>	Development of Apps, Mobile Apps and/or Server Application in the field of Health Care; including Requirement Engineering and Evaluation			

<b>#2</b>		<b>Hochschule Niederrhein</b>		
<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Competence Center eHealth	Otten, Prof. Dr. Hubert hubert.otten@hs-niederrhein.de	1	Software Engineering/Health Informatics Englisch B2.2	B, M
<b>Time frame:</b>	May-July			
<b>Institute's focal research areas</b>	Development of Apps, Mobile Apps and/or Server Application in the field of Health Care; including Requirement Engineering and Evaluation			

## University of Paderborn

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 1.360 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 20.200 students currently studying at the University, among them about 2.170 international students.

[www.uni-paderborn.de](http://www.uni-paderborn.de)

Language courses: 4 weeks crash course of 20 hours per week; begins before the official start of the semester in March and in September. Another course of 10 hours per week runs during the semester. These offers are subject to change due to a currently ongoing restructuring of our German courses.

Please contact International Office, Paderborn

Web: [www.upb.de/studium/international-office/deutschkurse/](http://www.upb.de/studium/international-office/deutschkurse/)

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#1	<i>Paderborn University</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Physics, Faculty of Science	Prof. Dr. Arno Schindlmayr Department of Physics, Paderborn University, Warburger Str. 100, 33098 Paderborn, Germany e-mail: arno.schindlmayr@upb.de phone: +49 (5251) 60 23 38	1	Theoretical Physics, Applied Mathematics	M, P
<b>Time frame:</b>	12 weeks from 1 October until 22 December 2020			
<b>Institute's focal research areas</b>	<p>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 performance 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 test systems that have either analytic or numerically exact solutions for comparison. This offers a variety of possible short-term projects for candidates with a background of theoretical solid-state or molecular physics, computational science or applied mathematics.</p>			

## University of Wuppertal

Bergische Universität 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 20.000 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>

Our Language Center “Sprachlehrinstitut –SLI”

<http://www.sli.uni-wuppertal.de/en/germanasforeignlang.html> offers the following courses of German as a foreign language:

- Intensive German Courses for perspective students  
Levels: A1 (beginners) to C1 (advanced). Weekdays daily beginning in April and October each year with 30 hours per week.
- German Courses in the evening for international guests beginning in October. Levels: A1, A2, B1. Sessions of three hours each will be held twice a week
- 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

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#1	<i>University of Wuppertal</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Mechanical Engineering – Engineering Design	Prof. Dr. Peter Gust E-mail: peter.gust@uni-wuppertal.de Phone: +49 (0)202 439-2046	1	Mechanical Engineering	M or P
<b>Time frame:</b>	May – mid July			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- Robust design of mechatronic products</li> <li>- Product Development: Methods and tools</li> <li>- Quality management in development</li> <li>- Knowledge management with Wiki systems,</li> <li>- Development of multi-articular systems</li> <li>- Tolerance analyses and tolerance management</li> </ul>			

#2	<i>University of Wuppertal</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Center for international studies in social policy and social services	Prof. Dr. Heinz Sünker Email: <a href="mailto:suenker@uni-wuppertal.de">suenker@uni-wuppertal.de</a> Phone: +49 (0)202 439-2295	1	Social Sciences; Education; Social Policy; Social Work; Migration; Gender; Social Sciences and Law	M; P
<b>Time frame:</b>	May to July or October to December			
<b>Institute's focal research areas</b>	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.			

#3	<i>University of Wuppertal</i>			
Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Research group Experimental Particle Physics	Prof. Dr. Wolfgang Wagner Email: <a href="mailto:wagner@uni-wuppertal.de">wagner@uni-wuppertal.de</a> Phone: +49 (0)202 439-2861	1	Physics	B or M or P
<b>Time frame:</b>	Two time windows are offered to make sure the fellow is well supervised: April 01 to June 30 or October 01 to December 23			
<b>Institute's focal research areas</b>	Our group does research in the field of elementary particle physics with the ATLAS detector at the Large Hadron Collider (LHC) at the European Centre for Nuclear Research (CERN). The students can choose from two projects: a) data analysis in top quark physics, or b) digital electronics for detector readout. In the analysis project, the student will work on studies based on simulated events, preparing analyses to search for additional (new) heavy particles which decay to top quarks. The aim is to obtain a basic understanding of the event kinematics depending on the mass of the new particle. Alternatively, the student can also choose to work on studies supporting a high precision measurement of the top-quark mass in single top-quark events observed with the ATLAS detector. In the hardware project, the student will work together with researchers preparing a future upgrade of the ATLAS pixel detector to cope with higher readout bandwidth. The student will learn how to layout a small printed circuit board used at a test stand we operate here in Wuppertal. The test setup mimics conditions expected at the high luminosity LHC regarding the data rates and is based on hardware built for a recent upgrade of the ATLAS pixel detector.			