

INTERNATIONAL PROGRAMMES

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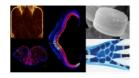
Doctorate





Dresden Intl. Graduate School for Biomedicine and Bioengineering

Dresden University of Technology • Dresden











Overview

Degree	PhD/Dr rer nat/Dr rer medic/Dr-Ing
In cooperation with	International Max Planck Research School for Cell, Developmental and Systems Biology (IMPRS-CellDevoSys) under the umbrella of the Dresden International PhD Programme (DIPP)
Teaching language	• English
Languages	 All courses are held in English. The primary language in the labs is English. The PhD thesis is written and defended in English.
Programme duration	8 semesters
Beginning	Only for doctoral programmes: any time
Application deadline	Applications are accepted twice a year via an online application system. For 2023/2024 applications, please check our website for updates: www.digs-bb.de/phd
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	The Dresden International Graduate School for Biomedicine and Bioengineering (DIGS-BB), is a well-established, structured PhD programme of the Technische Universität Dresden (TUD). It was founded in 2006 as part of the successful application of the TUD within the German Excellence Initiative.
	The DIGS-BB provides interdisciplinary training and research opportunities for bold and ambitious university graduates who wish to work towards a PhD in the fields of Biological Sciences (molecular cell and developmental biology, regenerative and degenerative biology, genetics, biochemistry), Biomedicine (oncology, metabolism, physiology, immunology, neurobiology, cardiovascular research, diabetology, haematology), Biological Physics (quantitative biology,

biophysics and/or theoretical physics), Bioengineering & Biomaterials.

As part of the structured PhD programme, PhD students profit from in-depth expert training in their specific research area, supplemented by training modules in any of the other research areas. Special focus is also placed on providing all PhD students with complementary writing and communication skills. Each student's Thesis Advisory Committee (TAC) and our "open door" environment provide strong guidance and mentoring.

The **research environment in Dresden** provides a unique combination of scientific expertise in the relevant scientific fields and reaches out towards its translation into biomedicine and applied bioengineering and biophysics. An inspiring and international atmosphere, collaborative and cross-disciplinary research, and state-of-the-art research centres and facilities provide the infrastructure for an internationally recognised research and training environment.

In addition, DIGS-BB PhD students can profit from courses offered in cooperation with the International Max Planck Research School for Cell, Developmental and Systems Biology (IMPRS-CellDevoSys) as well as transferable skill courses and services offered by the Graduate Academy at the TU Dresden.

Course Details

Course organisation

The programme is dedicated to advanced and research-oriented training of exceptional young scientists. It promotes the ability to independently address research questions in an interdisciplinary context and places great emphasis on expert thesis supervision. Each PhD student is guided by a Thesis Advisory Committee (TAC) throughout the thesis work.

The thesis work is complemented by a structured training curriculum with some modules offered in cooperation with the International Max Planck Research School for Cell, Developmental and Systems Biology (IMPRS-CellDevoSys).

Admission to the programme is highly competitive, with approximately 40 candidates being admitted each year. PhD students have a primary affiliation with one of the participating research groups, and they are enrolled as PhD students at TU Dresden. The duration of the thesis is three and a half to four years. The language of the PhD programme is English.

Tailor-made compulsory training: four-week laboratory rotations in at least two different DIGS-BB research groups during the first two years of PhD. Rotations are aimed at learning techniques, methods, experimental approaches, and theoretical background, necessary or beneficial for the PhD student and the PhD project as well as to foster interactions and collaborations within the research community.

Communication of Science: Within the first year of their PhD work, DIGS-BB PhD students will participate in a four-day workshop that will explore the main writing challenges they will face during their PhD studies and equip PhD students with the tools necessary to establish an effective approach to research writing and develop the skills to integrate writing more effectively into the research process. In subsequent years, PhD students will have the option to apply for additional elearning training in specific areas of writing according to their interest and needs.

Good Scientific Practice (GSP):As part of the compulsory training, PhD students will receive an introduction to GSP and scientific misconduct. This training is often accompanied by a **data visualisation** lecture/workshop.

Advanced Methods Courses: PhD students may elect practical courses that are offered by faculty members and/or facilities. Examples of subjects include recombineering, data analysis, image analysis and microscopy.

Advanced Lecture Series: These lecture series are offered by faculty members. They cover research fields within the PhD programme. Examples include stem and germ cells, biostatistics, developmental cell biology, neurosciences, and modelling and simulation of biological systems.

In addition, PhD students at the DIGS-BB have access to international speaker seminars, journal clubs, internal seminars, vision talks.

Transferable Skills: DIGS-BB PhD students have access to the wide variety of transferable skills courses offers provided by the TU Dresden Graduate Academy.

Other Activities: Predoc Scientific Symposium, Career Day, Graduation Day, Ask the Expert programme, Science Goes to School, Predoc Campus Symposium

Integrated inte	rnships
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Compulsory training equivalent to four weeks of lab rotations

Teaching/work obligations or opportunities

Opportunities:

- Science Goes to School: On a regular basis, a multicultural group of PhD students visit an 8th to 12th grade school class. The aim is to ignite pupils' curiosity for science and develop a culture of tolerance and respect for people from different cultural backgrounds.
- Supervision of interns within the DIGS-BB summer internship programme

Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses

No

Costs / Funding

Tuition fees per semester in EUR

None

Semester contribution

Currently, matriculated students pay approx. 300 EUR per semester (i.e. for six months). This includes a ticket for public transport in Dresden (bus, tram, ferry, suburban trains) and regional trains in the Federal State of Saxony. The contribution also assures concessions in the university cafeterias and offers benefits (e.g. price reductions) for many cultural and leisure activities in Dresden. However, matriculation at TUD is optional for PhD students.

Costs of living

Dresden offers a high quality of life at moderate costs. The PhD student salary is sufficient to cover the living costs and allows for travel and leisure activities.

Funding opportunities within the university

Yes

Description of the abovementioned funding opportunities within the university DIGS-BB PhD students can apply for funding grants within the DIGS-BB and the Graduate Academy of the TU Dresden, e.g. to support travelling to conferences, training opportunities, and research visits.

Requirements / Registration

Academic admission requirements

We welcome applications from ambitious, highly qualified and motivated students of all nationalities. We expect excellent academic performance and prior research experience, along with the potential and enthusiasm to conduct challenging, top-class research towards a PhD.

Applicants must hold, or anticipate receiving before taking up thesis work, a Master's degree in a

relevant discipline: life sciences, natural sciences, bioengineering, material science, medicine, computer science, physics/biophysics or applied mathematics.

Language requirements	The language of the programme is English. Therefore, a high proficiency in English is required. A formal proof is not obligatory. However, TOEFL or IELTS results and GRE examination results can be uploaded within the online application system.
Application deadline	Applications are accepted twice a year via an online application system. For 2023/2024 applications, please check our website for updates: www.digs-bb.de/phd
Submit application to	Apply online

Services

and doctoral candidates

Possibility of finding part- time employment	The PhD thesis work in the DIGS-BB is a full-time commitment. The salary is sufficient to cover living expenses.
Accommodation	DIGS-BB students benefit from the support of the International Office in finding accommodation. Accommodation for the first weeks is available either via the "Studentenwerk" (Student Association) or another guest house, which we strongly recommend, as it takes a couple of weeks to find long-term accommodation. Subsequently, a place can be found on the private market or in a shared apartment, known as a "Wohngemeinschaft" in German. Monthly rent for a single room in a student residence (for the first weeks in Dresden) or a shared apartment (long term) is approx. 450 EUR. Monthly rent starts at around 500 EUR for a single apartment (long term). Private housing can be found online.
Structured research and supervision	Yes
Research training / discussion	Yes
Career advisory service	Career advisory is offered within the PhD programme, e.g. by the Thesis Advisory Committee (TAC), through the Career Day, organised together with our partner programme, the Alumni Mentoring Programme, and alumni contact. The Graduate Academy of the TU Dresden also offers career advisory opportunities.
Support for international students and doctoral candidates	Visa matters
General services and support for international students	The DIGS-BB International Office provides expert support and assistance for international PhD students before arrival and during their stay in Dresden. The intention is to enable a smooth

transition to Dresden and to handle the wheels of bureaucracy associated with living in a foreign

country. PhD students are well taken care of and can concentrate on their thesis work from the very beginning. Services include help with visa, registration/residency permits, flat hunting, bank account, medical care and insurance, other insurances (household, third party liability, law protection etc.), and other questions of everyday life. DIGS-BB PhD students also receive support for doctoral proceedings from registration to thesis defence.

Dresden University of Technology

TU Dresden is one of eleven Universities of Excellence in Germany and is among the top universities in Europe: strong in research, it offers first-rate programmes with an overwhelming diversity, with close ties to culture, industry and society. As a modern comprehensive university with five schools (17 faculties), it offers a wide academic range of programmes. With 30,000 students (18% international) TU Dresden is the largest university in Saxony. It enjoys an outstanding national and international reputation for research in natural and engineering sciences.

One of the most prominent characteristics of TU Dresden is its dynamic development – a process that has been going on for years and will continue into the future. As a "synergetic university", TU Dresden closely cooperates with external research institutions as well as cultural, industrial, and social organisations. Students also benefit from interdisciplinary collaboration with a focus on practical outcomes. Teaching and research follow the principle of involving both students and graduates into current research early on.



University location

The capital of the Free State of Saxony, Dresden, stands majestically on the river Elbe. The fourth-largest city by area in Germany, Dresden is home not just to riverside palaces, Baroque churches and world-class museums but also to a proud history of science and technology. This finds continuity into the present with the DRESDEN-concept, an alliance of 36 research institutions in and around Dresden, of which TUD is a proud and prominent member. Whether you are interested in theatre, opera, cabaret or cinema, or if you enjoy a stroll through museums or a night out at the pub, Dresden has something to offer for everyone. Students also get an opportunity to be active in the many sports facilities in Dresden, including TU Dresden's own, or in the surrounding nature of the Elbe landscape, the Elbe Sandstone Mountains (Elbsandsteingebirge) or the Ore Mountains (Erzgebirge). The surroundings of the city have plenty to offer and the city is an excellent hub from which to explore Berlin, Prague, Leipzig and Wrocław.

Contact

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https://twitter.com/digsbb

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Editor

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Disclaimer

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