

# INTERNATIONAL PROGRAMMES

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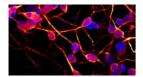
# Master's degree





# **Regenerative Biology and Medicine**

Dresden University of Technology • Dresden











### Overview

Degree	Master of Science
Teaching language	• English
Languages	English (100%)
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	31 May for the following winter semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	Characterised by the close network of science and clinical practice, regenerative medicine is an extremely diverse and rapidly developing interdisciplinary field in which significant progress has recently been made in the regeneration and replacement of tissues, which is particularly evident in view of the steadily growing importance of stem cell research for the use in medicine.  The international Master's programme in Regenerative Biology and Medicine, established more than ten years ago in a highly innovative, research-driven environment, offers a highly interdisciplinary education in the fields of stem cell research, regenerative biology, molecular biology, tissue engineering and clinically oriented human biology and pathology for research or for the processing of regulatory aspects in the development and translation of regenerative therapy approaches. The Master's programme combines comprehensive theoretical knowledge with extensive practical experience, gained directly in the research laboratories of the cooperating institutes and clinics.  Two extensive laboratory rotations take place in the second and third semesters. The possible applications of state-of-the-art technologies for a specific scientific question in the areas of cell, organ and model organism-based research as well as molecular biology research are the focus of the 12-week individual laboratory projects. Both areas must be completed. The research groups

can be chosen according to individual interest.

Starting in the second semester, students will select a key subject area and a specialisation from the following:

- (1) Developmental and Regenerative Cell Biology (advanced knowledge of the central molecular and cellular mechanisms regulating the development and regeneration of the tissues and organs of the most important model organisms as well as the current associated experimental methods of analysis)
- (2) Regenerative Neuroscience (advanced knowledge of the cellular, molecular, systemic and regenerative neurosciences and the current associated experimental methods of analysis, as well as the clinical concepts of diseases for which neurogenerative treatments exist or are being developed)
- (3) Regenerative Medicine (advanced knowledge of the pathology of diseases and the affected organ systems as well as the associated clinical concepts of regenerative medicine, including bench-to-bedside translation processes)

### **Course Details**

#### Course organisation

The course structure is modular. The courses are evenly spread over three semesters. The fourth semester is reserved for the preparation of the Master's thesis (can be written at one of the many research institutes in Dresden or abroad) and for the colloquium.

The course comprises nine compulsory modules, one elective module and a track that is chosen after the first semester. In-depth knowledge is imparted in these tracks in the areas of (1) Developmental and Regenerative Cell Biology (DevReg), (2) Regenerative Neuroscience (RegNeuro) and (3) Regenerative Medicine (RegMed).

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# A Diploma supplement will be issued

Yes

### International elements

- International guest lecturers
- Language training provided

# Description of other international elements

The programme is taught entirely in English. Many of the professors and researchers are from abroad, exposing the students to a very international atmosphere. The working language at the institute is also English. We offer in-house German courses.

### Integrated internships

The students need to complete two lab rotations in the fields of (1) Molecular Biology Research and (2) Cell, Organ and Model Organism Based Research. These are part of the curriculum and comprise 225 hours each. The student office will assist students in finding a placement.

# Course-specific, integrated German language courses

No

### Course-specific, integrated English language courses

No

# Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Currently, students pay approx. 300 EUR per semester (i.e. for six months), including a ticket for public transport in Dresden (bus, tram, ferry, "S-Bahn" suburban train) and regional trains in the Federal State of Saxony. Students can also use a bike rental service all over the city for free for 30 minutes. The contribution also assures concessions in the university cafeterias and offers benefits (e.g. price reductions) for many cultural and leisure activities in Dresden.
Costs of living	Dresden offers high quality of living at very moderate costs. Currently, students should expect to pay around 850 EUR per month including rent, food, insurance and basic expenses. This figure is relatively low compared to other big German cities.
Funding opportunities within the university	Yes
Description of the above- mentioned funding opportunities within the university	Deutschlandstipendium, special grant opportunities for thesis semester by CRTD e.V.  General information on scholarships and funding for students is summarised ona dedicated web page of the TU Dresden.

# Requirements / Registration

Academic admission

requirements

	<ul> <li>a first university degree in biology or medicine or a similar degree (e.g. biotechnology, biochemistry, etc.) qualifying for a profession where comparable previous knowledge is needed, especially in molecular and cell biology</li> <li>a strong command of the English language</li> <li>solid knowledge in biology or medicine and solid laboratory experience</li> <li>interest in cell and molecular biology research with a clinical connection in the field of regenerative medicine</li> <li>inquisitiveness, initiative, and independent thinking</li> </ul>
Language requirements	We require a strong command of the English language. Non-native speakers need to provide proof of their language proficiency, e.g. TOEFL iBT: minimum level 92 points or IELTS: minimum level 6.5. Certificates of other tests of equivalent standard will also be considered.
Application deadline	31 May for the following winter semester
Submit application to	https://tud.de/online-bewerbung Additionally, an application in our online database is mandatory. A link will be provided on the course website.

Our programme is targeted towards students who have:

### **Services**

### time employment

so, different regulations apply for students from EU member states, countries of the European Economic Area (EEA) and Switzerland, and students from outside the European Union and the EEA area. In addition, restrictions on the duration of employment may apply. Professors, lecturers and group leaders involved in the Master's programme may offer students the possibility of working as academic assistants. However, living expenses can be financed only partially through a job as an academic assistant.

#### Accommodation

It is still relatively easy to find affordable accommodation in Dresden. Accommodation is available either via the "Studentenwerk Dresden" or on the private market. Rent for a single room in a student residence is approx. 250 EUR per month.

Private housing can be found online. We recommend that you move into a hall of residence at the beginning of your stay in Dresden. Subsequently, you can look for a place on the private market or in a shared apartment, which is known as a "Wohngemeinschaft" in German.

### Career advisory service

TU Dresden offers plenty of counselling and training by the Career Service to help students with finding professional orientation. They offer workshops to equip students with professional skills and help optimise their CVs.

Additionally, there are special workshops for international students to get to know the German and Saxon job market and network.

# Support for international students and doctoral candidates

- Welcome event
- Specialist counselling
- Visa matters

General services and support for international students and doctoral candidates

International student office



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Elena Tonchevska
MSc, RegBioMed Alumna

Being accepted for this Master's programme was a dream come true. It is one of the few that gives you the opportunity to learn about stem cells, regenerative medicine and translational research. It is very international, and you will study with incredible young scientists from all over the world. In my opinion, the best part is to gain insight into the translation of research into clinic. It is incredibly exciting to know how your scientific discovery can eventually change the life of a patient.



CRTD – General Film and Focus on Diabetes Research, Prof Ezio Bonifacio, Director

CRTD – General film and focus on diabetes research, comments by Prof Ezio Bonifacio

more: https://www.youtube.com/watch? v=j7Rqfnrx\_9s

# Dresden University of Technology



DFG Center for Regenerative Therapies Dresden (CRTD) at the TU Dresden
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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**

### **Dresden University of Technology**

Center for Molecular and Cellular Bioengineering (CMCB)

Maciej Landowski

Fetscherstraße 105 01307 Dresden

Tel. +49 35145882063

Course website: https://tu-dresden.de/cmcb/lehre/masters-courses

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# International Programmes in Germany - Database

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#### Editor

DAAD - Deutscher Akademischer Austauschdienst e.V. German Academic Exchange Service Section K23 – Information on Studying in Germany Kennedyallee 50 D-53175 Bonn www.daad.de

### **GATE-Germany**

Consortium for International Higher Education Marketing www.gate-germany.de

### Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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