



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Table of Contents

Master's degree	2
Bonn-Cologne Graduate School: MSc in Physics (Cologne) • University of Cologne • Köln.....	2

Master's degree



Bonn-Cologne Graduate School: MSc in Physics (Cologne)

University of Cologne • Köln

Overview

Degree	Master of Science in Physics
In cooperation with	University of Bonn
Teaching language	<ul style="list-style-type: none">English
Languages	Courses are held in English. Participants are encouraged to write their Master's thesis in English.
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	<p>15 July for the following winter semester (October to March) 15 January for the following summer semester (April to September)</p> <p>National and international students interested in joining the BCGS stipend programme have to apply by 1 December for the following winter semester. Selected applicants will be invited for an admissions academy (March/April). Please note that admission to the stipend programme is only possible for the winter semester.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Bonn-Cologne Graduate School of Physics and Astronomy is a joint programme of graduate studies between the Universities of Bonn and Cologne that was funded through the Excellence Initiative from 2007 to 2019.</p> <p>The MSc programme in Cologne comprises a mandatory part made up of required courses (advanced quantum mechanics or statistical physics and an advanced lab course) as well as an optional part with a broad range of choices. This includes a Master's thesis at the frontier of current research.</p> <p>The two-year Master's programme builds upon the Bachelor's programme. Students acquire advanced skills to solve more complex problems. In this programme, students select their main and minor subjects according to their interests from a considerable number of research areas covered by the Cologne physics institutes.</p>

Initially, courses in two main areas of specialisation will be taken. These subjects are oriented in accordance with the main research activities of the participating physics institutes. One of the subjects will develop into the primary, the other into the secondary area of specialisation. As a rule, the primary area of specialisation is also the basis for the MSc thesis.

The primary areas of specialisation are:

- General Theory of Relativity/Quantum Field Theory
- Astrophysics
- Nuclear and Particle Physics
- Condensed Matter Physics
- Molecular Physics
- Statistical and Biological Physics
- Solid State Theory/Computational Physics

Course Details

Course organisation

All graduate studies (MSc and PhD) in the department of physics at the University of Cologne are coordinated by the Bonn-Cologne Graduate School of Physics and Astronomy.

The following list gives an overview of the curriculum for the MSc in Physics. Hours per week and credit points are given in brackets (HPW Lecture/HPW Problem Classes/HPW Practical Courses/CPs).

Semester One

- Practical Course M I (0/0/3/6)
- Secondary Area of Specialisation (depending on choice of subject)
- Advanced Quantum Mechanics or Advanced Statistical Physics (4/2/0/9)
- Elective Area (depending on choice of subject)
- Primary Area of Specialisation (depending on choice of subject)

Semester Two

- Practical Course M (0/0/3/6)
- Secondary Area of Specialisation (depending on choice of subject)
- Elective Area (depending on choice of subject)
- Primary Area of Specialisation (depending on choice of subject)

Semester Three

- Introductory Project I (9/0/0/12)
- Introductory Project II (9/0/0/12)
- Primary Area of Specialisation (depending on choice of subject)

Semester Four

- Research Module Master's thesis (six months/30)

Total number of credits points in:

Primary Area of Specialisation: 21 CP

Secondary Area of Specialisation: 12 CP

Elective Area: 12 CP

A Diploma supplement will be issued

Yes

International elements

- International guest lecturers
- Specialist literature in other languages

- Projects with partners in Germany and abroad

Integrated internships	Research internships are a key element in the research training of the graduate school. Students become temporary members of a research group for a typical duration of four weeks, and start their first small research project. This not only provides initial research experience but also helps with the selection of an MSc project. The internships are coordinated by the BCGS lecturers. Participation in at least one research internship is mandatory for first year students in the stipend programme.
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	Approx. 320 EUR per semester Fee includes a semester ticket covering public transport in the entire federal state of North Rhine-Westphalia.
Costs of living	Approx. 940 EUR per month
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Full scholarships for highly qualified students are available in the stipend programme. Students in this programme receive 935 EUR per month for a maximum of two years. Interested students have to apply for the BCGS stipend programme (deadline: 1 December for the following winter semester).

Requirements / Registration

Academic admission requirements	Bachelor of Science in Physics or equivalent
Language requirements	Proof of English language skills: level B2 of the Common European Framework of Reference for Languages
Application deadline	15 July for the following winter semester (October to March) 15 January for the following summer semester (April to September) National and international students interested in joining the BCGS stipend programme have to apply by 1 December for the following winter semester. Selected applicants will be invited for an

admissions academy (March/April). Please note that admission to the stipend programme is only possible for the winter semester.

Submit application to

For details, see: <http://www.gradschool.physics.uni-koeln.de/index.html#section-8>

Services

Possibility of finding part-time employment

A number of student assistantships may be available during the programme.

Accommodation

Accommodation is available through the student union ("[Kölner Studierendenwerk](#)") or the private housing market.

Support for international students and doctoral candidates

- Welcome event
- Specialist counselling
- Visa matters
- Pick-up service

General services and support for international students and doctoral candidates

The Department of Physics in Cologne offers support for newly arrived students when it comes to bureaucratic matters (enrolment, health insurance, residence permit, etc.). Additionally, a mentor programme (individual academic counselling), a tutor programme (studying in small learning groups), and language courses in German are offered. Further support is available through the International Office of the UoC (<https://portal.uni-koeln.de/en/international>).

Our Partners



University of Cologne

The University of Cologne is a modern university in the heart of Europe. Academic excellence, internationality, and widely varied curricula create a vibrant and inspiring environment for students, scientists, and scholars. Since its distinction within the scope of the German Excellence Initiative 2012, the University of Cologne has belonged to a small group of elite universities in Germany.





University location

With a population of over one million people, Cologne is the fourth-largest city in Germany and the largest city in the federal state of North Rhine-Westphalia. Located in the heart of Europe on an ancient trade route – the River Rhine – Cologne has been an important trade location since the Middle Ages. Cologne has a booming economic sector that includes commerce, trades, banks, and international corporations. It is one of Europe's most important media hubs and is home to a variety of television and radio broadcasters. Furthermore, Cologne offers many museums, art exhibitions, cinemas, theatres, cultural events, international-level concerts, and, of course, the Cologne Carnival, which is the city's "fifth season".

Contact

University of Cologne

Bonn-Cologne Graduate School of Physics and Astronomy

Dr Petra Neubauer-Guenther

Zùlpicher Str. 77
50937 Köln

✉ gradschool.physics@uni-koeln.de

🌐 Course website: <https://physik.uni-koeln.de/index.php?id=171>

📘 <https://www.facebook.com/BCGSPhysAstro/>

Last update 08.05.2024 23:54:15

International Programmes in Germany - Database

www.daad.de/international-programmes
www.daad.de/sommerkurse

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".

The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.



Federal Ministry
of Education
and Research