



# Master Course

Fachschaft Physics/Astronomy

Winter Term 2024/2025

30.09.2024

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Have you heard about the  
“Fachschaft”?

by the way, I'm Henry

# Student Council - *The Fachschaft*

What we are...

- a group of students
  - everything between first-years and PhDs
- involved in many of the intricate bits of the bureaucracy
  - part of department councils, meetings and decisions
- organizers of many events
  - this very week
  - community events like parties, barbecues and social networking activities
- help in nearly all things regarding physics or the studies here in Bonn
- not paid (sadly)
- doing it because we really like it.



# The Room where it happens



- HISKP room 0.027: The Fachschaftsraum
- has all the necessary goods
  - throughout the semester: regular opening hours where help is (should be) available
  - a printer (called Marvin)
  - a coffee maker (instruction upon request)
    - we also do tea, no worries
  - small amount of workspace
  - PCs to interact with Marvin (they have issues and so does Marvin)
  - maybe even something else to drink

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# Welcome Week

step by step

# What is time anyways?



**Exams:**

18:00 means **18:00**

18 s.t. means **18:00**

**Lectures:**

18 c.t. means **18:15**

**Appointments:**

18 Uhr means **18:15**



**Today,**  
30.09.2024

**10:00 - 11:30**

HISKP Lecturehall 1

*NOW*

**Welcome Talk:**  
How to: OE

**11:30 - 12**

HISKP Foyer

**Campus tour**

**12 s.t. - 13**


Mensa CAMPO

**Lunch**

**13 s.t. - 16**

HISKP Foyer

**Laboratory tours**



**Tuesday,**  
01.10.2024

**10 s.t. - 12**  
HISKP SR1 (1st Floor)

**Q & A with us**

**12 s.t. - 13**  
HISKP Lecturehall 1

**BCGS Infotalk**

**13 s.t. - 14**  
Mensa CAMPO

**Lunch**

**14 s.t. - 18**  
HISKP SR 2 (3rd Floor)

**Boardgame  
Afternoon**





**Wednesday,**  
02.10.2024

**10 s.t. - 12:15**  
HISKP Foyer

**Astro-Tour**

**12 s.t. - 13**  
Mensa CAMPO

**Lunch**

**13 s.t. - 14:30**  
HISKP Lecturehall 1

**Student Advisor  
Talk**



**Thursday,**  
03.10.2024

**FREE**

but...

**Meet Your Fachschaftler  
(with BBQ)**

**14:00**  
behind the HISKP



**Friday,**  
04.10.2024

**“Theoretical Breakfast”**

**10 s.t. - 13**  
HISKP SR 1

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# Bonn-Cologne Graduate School

# What is the BCGS?

- joined program of graduate studies between Bonn and Cologne
- it provides mentoring as well as social and scientific connections
- connects the phases of MSc and PhD to form one coherent concept

BCGS Talk:  
Tuesday, 01.10., 12 s.t.  
HISKP Lecturehall 1

Bonn Office: Isabela Fox

[gradschool.physics@uni-bonn.de](mailto:gradschool.physics@uni-bonn.de)

+49-228-73-2826

2.011 & 2.012,  
HISKP  
Nussallee 14-16  
53115 Bonn

## Opening hours Bonn

- Tuesday - Wednesday  
09:30 - 14:00
- Thursday  
10:00 - 14:00
- Closed on Monday and Friday.  
Please contact us via email.



**Dr. Bernadette Schorn**

[bschorn@uni-bonn.de](mailto:bschorn@uni-bonn.de)

+49 228 73 4832

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# Bureaucracy

*from once in a lifetime to daily activity*

exam organisation physics bonn

Alle Bilder Videos News Bücher Web Finanzen Suchfilter

Jetzt geöffnet Top-Bewertung Rollstuhlgerechter Eingang

Tipp: Ergebnisse in deutscher Sprache anzeigen. Informationen zum Filtern findest du hier.

Universität Bonn  
<https://www.physik-astro.uni-bonn.de> · Diese Seite übersetzen

exam-organization - Physik/Astronomie  
 Examination dates and deadlines. Here you can find registration/deregistration deadlines for courses.

## Exam organization

For all enrolled students, the examination authority responsible for their degree program (examination board, in German *Prüfungsausschuss*) is an important point of contact. The Examinations Office (*Prüfungsamt*) is the office of the Examination Board and answers your questions about the examination procedure.

For example, we can help with problems with exam registration and deregistration. At the beginning of your studies,



Examination regulations and modules

Applications and forms

FAQ Bachelor's degree in Physics (in German)

FAQ Master of Science in Physics/Astrophysics

## Anträge und Formulare

| Bachelor of Science in Physik                      | Master Physik und Astrophysik   |
|--|---|
| Antrag auf Zulassung zur Bachelorprüfung in Physik | Application form for admission to the master's examination Astrophysics ↓ |
| Antrag zur Bachelorarbeit                          | Application form for admission to the master's examination Physics ↓      |
| Bachelorarbeit Beispieltitelseite ↓                | Application form master thesis Astrophysics ↓                             |
| Antrag auf Verlängerung Bachelorarbeit ↓           | Application form master thesis Physics ↓                                  |
| Bescheinigung Prüfungsunfähigkeit ↓                | Application extension submission deadline Master's thesis ↓               |
| Antrag auf Ausgleichsregel-Auslandssemester ↓      | Master's Thesis Design ↓  |
| Antrag zum Betriebspraktikum ↓                     | Colloquium form ↓   |
|  | Application form Research Project ↓                                       |



Jetzt geöffnet

Top-Bewertung

Rollstuhlgerechter Eingang

| Anmeldung ab | Anmeldung bis                     | Abmeldung bis |
|--------------|-----------------------------------|---------------|
|              | Frist beendet                     |               |
|              | Frist endet in spätestens 7 Tagen |               |
|              | Frist läuft                       |               |

**Wintersemester 2024/2025, 1. Termin**

|            |  |   |            |            |            |   |
|------------|--|---|------------|------------|------------|---|
| 30.08.2024 | SL Praktikum Elektromagnetismus (623300361)  |   | 01.07.2024 | 31.08.2024 | 30.09.2024 | 1 |
| 08.09.2024 | physik561/physik412: Praktikum Atome, Moleküle, Kondensier Materie                                     |   | 17.06.2024 | 08.09.2024 | 18.10.2024 | 1 |
| 08.09.2024 | physik661/physik512: Praktikum Kern- und Teilchenphysik  |   | 17.06.2024 | 08.09.2024 | 18.10.2024 | 1 |
| 15.10.2024 | Preparatory Lab Course   |   | 25.07.2024 | 15.10.2024 | 15.10.2024 | 1 |
| 31.10.2024 | astro830: Seminar on Modern Topics in Astrophysics   |   | 22.08.2024 | 31.10.2024 | 07.11.2024 | 1 |
| 31.10.2024 | physics650: Seminar  |   | 21.08.2024 | 31.10.2024 | 07.11.2024 | 1 |
| 31.10.2024 | physik541: Proseminar Präsentationstechnik   |   | 21.08.2024 | 31.10.2024 | 07.11.2024 | 1 |
| 15.01.2025 | LABphysik515: Fachdidaktische Übungen V  |   | 01.10.2024 | 15.01.2025 | 31.01.2025 | 1 |
| 27.01.2025 | astro8531: The Physics of Dense Stellar Systems  | Klausurtermin: 27.01.2025, 15 Uhr, HS, AIfA | 01.10.2024 | 15.01.2025 | 26.01.2025 | 1 |
| 31.01.2025 | Seminar zur Fachdidaktik   |   | 01.10.2024 | 31.01.2025 | 31.01.2025 | 1 |
| 16.03.2025 | physics743: Platforms for Quantum Technologies   |   | 01.10.2024 | 16.03.2025 | 16.03.2025 | 1 |
| 31.03.2025 | LABphysik531/571/581 mdl. Prüfungen Lehramt  | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik261/physik112: Prüfung Praktikum Mechanik, Wärmelehre  | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik361: Prüfung Praktikum Elektromagnetismus, Optik/physik212: Prüfung Praktikum Elektromagnetismus | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik471: Übersichtsprüfung Experimentalphysik Teil I   | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik542: Seminar zur Bachelorarbeit  | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik590/physik690: Bachelorarbeit  | Abgabetermin: 1.10.2024-31.3.2025           | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik671: Übersichtsprüfung Experimentalphysik Teil II  | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |
| 31.03.2025 | physik681: Übersichtsprüfung Theoretische Physik   | Prüfungstermine: 1.10.2024-31.3.2025        | 01.10.2024 | 31.03.2025 | 31.03.2025 | 1 |



You are here: Home

- Managing your studies
- Course schedule
- My Degree program curricula
- Registration/Unregistration of Lectures
- My courses
- Registration data (PDF)
- Examination registration and withdrawal
- Information on registered examinations
- Transcript of Records



## Examination registration and withdrawal

Please use the overview below to select the examination you want to register for or withdraw from. To do so, click on the title.



### Master of Science Physik 2014

1100 Pflichtmodule PO 2014

621116000 Base Module: Laboratory Course

621116090 Elective Courses Theoretical Physics

621116052 Alternative Prüfungen in physics605a

621216060 physics606: Advanced Quantum Theory

→ Examiner: Drees, Manuel, 2. Examiner: , Date: 01, Room: , Start: , Note: [registration of exam](#)

621316060 Exercises physics660

621116200 Specialization Module

621116500 Seminar

621117000 Elective Advanced Lectures

621119100 Scientific Exploration

621119200 Methods and Project Planning

3000 Additional Voluntary Courses (not counting for the exam) according to § 25 Prüfungsordnung

4000 Additional Voluntary Courses (not counting for the exam, records only kept in basis)

8000 Master Thesis

9000 Masterabschluss

### Repository

## Welcome to the learning platform of the University of Bonn

eCampus is the central teaching and learning platform of the University of Bonn. You will find the learning content, information and eLearning offers of the faculties and institutions in the following repository categories.

### Courses

### eCampus | Lernplattform der Universität Bonn

All eCampus courses from the electronic co

» Summer semester 24

» Winter semester 23/24

» All semesters



## Courses

## Dashboard

### Favoriten

#### Kurse

FS Physi [Magazin](#) > [Lehrveranstaltungen](#) > [WiSe 2024/25](#) > [Physik](#)

### Physik

Aktionen

| 2023/2

Inhalt info

Anmelde

| 2023/

Bachelor of Science Physik

Status: C

Bonn-Cologne Graduate School of Physics and Astronomy (BCGS)

| 2023/2

Lehramtsfach Physik (Bachelor)

Status: O

Lehrangebot für andere Fächer

| 2023/2

Master of Science Astrophysik

Anmelde

Master of Science Physik

| 2023/2

Masterstudiengang Lehramt Physik

Anmelde

#### Kurse

Physics in the Private Sector

Veranstaltungszeitraum: 7. Okt 2024 - 1. Feb 2025  
Verfügbarkeit: 19. Jul 2024, 14:50 - 1. Feb 2025, 14:50

# If you need advice

- Student Advisor Prof. Drees
- BCGS Secretary Isabela Fox
- Trust-Lecturers Prof. Bernlochner & Prof. Thiel

Student Advisor Talk:  
Wednesday, 02.10.,  
13s.t.  
HISKP Lecturehall 1

Bonn Office: Isabela Fox

[gradschool.physics@uni-bonn.de](mailto:gradschool.physics@uni-bonn.de)

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Nussallee 14-16  
53115 Bonn

## Opening hours Bonn

- Tuesday - Wednesday  
09:30 - 14:00
- Thursday  
10:00 - 14:00
- Closed on Monday and Friday.  
Please contact us via email.

## Fachstudienberater Master Physik



Prof. Dr. Manuel Drees

[drees@th.physik.uni-bonn.de](mailto:drees@th.physik.uni-bonn.de)

+49 228 732224

Nußallee 12  
53115 Bonn

© colourbox

# Foreign student in Bonn

## Division 6 – International Office

The International Office coordinates the international activities of the University of Bonn, and acts as the central point of contact for international students and researchers – before, during and after their time at the University. It also provides support to students and researchers of the University of Bonn in all issues relating to international mobility and cooperation.



### Prospective students

The [Student Registry](#) is the first point of contact for all international students regarding all interdisciplinary administrative questions about studying at the University of Bonn.

| Student Registry   | Adress                 |
|--|------------------------|
| +49 228 73-4464  | Poppelsdorfer Allee 49 |
| +49 228 73-4491  | 2nd Floor              |
| <a href="mailto:intstud@verwaltung.uni-bonn.de">intstud@verwaltung.uni-bonn.de</a> | 53115 Bonn (Germany)   |



### Students

The International Office provides counseling and support for international students and doctoral students for any organizational questions they face related to their studies and stay in Bonn.

| International Service Point                              | Adress                 |
|--|------------------------|
| +49 228 73-5544  | Poppelsdorfer Allee 53 |
| <a href="mailto:study@uni-bonn.de">study@uni-bonn.de</a> | 53115 Bonn (Germany)   |

**Opening hours**  
Monday to Friday, 08:00 am - 04:00 pm

## Department for International Students

### Referat für internationale Studierende

[international@asta.uni-bonn.de](mailto:international@asta.uni-bonn.de)  
Email

#### Staff

|  |  |   |
|--|--|---|
| <b>Elena Davydova</b><br>English, Deutsch, русский     | <b>Deborah Schwarz</b><br>English, Deutsch                       | <b>Hassan Elsayed</b><br>English, العربية |
| <b>Antonina Gaidukova</b><br>English, Deutsch, русский | <b>Aiym Jandybayeva</b><br>English, Deutsch, русский, Қазақ тілі | <b>Narges Mirzapour</b><br>English, فارسی |

**Nargiz Alizada**  
English, Deutsch, русский, Azərbaycan dili

#### Attendance Times

|                                |                           |
|--------------------------------|---------------------------|
| 14:00 - 16:00 online<br>Monday | 15:00 - 17:00<br>Thursday |
|--------------------------------|---------------------------|

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# MSc Physics in Bonn

|         |      | <b>Master of Physics</b>  |  |   |  |      |
|---------|------|---|--|---|--|------|
|         |      | Rheinische Friedrich-Wilhelms-Universität Bonn                          |  |   |  |      |
|         |      | (valid from WS 2014/2015)   |  |   |  |      |
|         |      | <b>Course Phase</b>   |  |   |  |      |
|         |      | <b>Compulsory</b>   | <b>Elective</b>  |   |  |      |
| 1. Sem. | Oct  | <b>physics601:</b><br>Advanced Laboratory Course<br>7 cp                | <b>Theoretical Physics (physics606)</b><br>or - If done previously -<br>1 module out of<br>physics751, physics754,<br>physics755, physics760,<br>physics7501 | Specialization<br>(at least 24 cp out of<br>physics61a, -61b, -61c<br>and/or<br>physics62a, -62b, -62c) | Elective Advanced Lectures<br>(at least 18 cp out of<br>physics70a, -70b,<br>-70c, -70d) | 18 c |
|         | Nov  |   |  |   |  |      |
|         | Dec  |   |  |   |  |      |
|         | Jan  |   |  |   |  |      |
|         | Feb  |   |  |   |  |      |
| 2. Sem. | Mar  |   |  |   |  |      |
|         | Apr  |   |  |   |  |      |
|         | May  |   |  |   |  |      |
|         | June |   |  |   |  |      |
|         | July |   |  |   |  |      |
| Aug     |      |   |  |   |  |      |
| Sep     |      |   |  |   |  |      |
|         |      | <b>Research Phase</b>   |  |   |  |      |
| 3. Sem. | Oct  | <b>physics910:</b><br>Scientific Exploration of the Master thesis topic |  |   | <b>physics920:</b><br>Methods and Project P  |      |
|         | Nov  |   |  |   |  |      |
|         | Dec  |   |  |   |  |      |
|         | Jan  |   |  |   |  |      |
|         | Feb  |   |  |   |  |      |
| 4. Sem. | Mar  |   |  |   | <b>physics930:</b><br>Master Thesis<br>15 cp   |      |
|         | Apr  |   |  |   |  |      |
|         | May  |   |  |   |  |      |
|         | June |   |  |   |  |      |
|         | July |   |  |   |  |      |
| Aug     |      |   |  |   |  |      |
| Sep     |      |   |  |   |  |      |

**Module:****Specialization: Advanced  
Experimental Physics**

Module No.: physics62a

**Course:****High Energy Collider Physics**

Course No.: physics633

| Category | Type                   | Language | Teaching hours | CP | Semester |
|----------|------------------------|----------|----------------|----|----------|
| Elective | Lecture with exercises | English  | 3+1            | 6  | ST       |

**Requirements for Participation:****Preparation:**

physics611 (Particle Physics)

**Form of Testing and Examination:**

Requirements for the examination (written): successful work with the exercises

**Length of Course:**

1 semester

**Aims of the Course:**

In depth treatment of particle physics at high energy colliders with emphasis on LHC

**Contents of the Course:**

Kinematics of electron-proton and proton-(anti)proton collisions,  
 Electron-positron, electron-hadron and hadron-hadron reactions, hard scattering processes,  
 Collider machines (LEP, Tevatron and LHC) and their detectors (calorimetry and tracking),  
 the Standard Model of particle physics in the nutshell, fundamental questions posed to the LHC,  
 spontaneous symmetry breaking and experiment,  
 QCD and electroweak physics with high-energy hadron colliders,  
 Physics of the top quark, top cross section and mass measurements,  
 Higgs Physics at the LHC (search strategies, mass measurement, couplings),  
 Supersymmetry and beyond the Standard Model physics at the LHC  
 Determination of CKM matrix elements, CP violation in K and B systems,  
 Neutrino oscillations

**Recommended Literature:**

V. D. Barger, R. Phillips; Collider Physics (Addison-Wesley 1996)  
 R. K. Ellis, W.J. Stirling, B.R. Webber; QCD and Collider Physics (Cambridge University Press 2003)  
 D. Green; High PT Physics at Hadron Colliders (Cambridge University Press 2004)  
 C. Berger; Elementarteilchenphysik (Springer, Heidelberg 2nd revised edition 2006)  
 A. Seiden; Particle Physics A Comprehensive Introduction (Benjamin Cummings 2004)  
 T. Morii, C.S. Lim; S.N. Mukherjee Physics of the Standard Model and Beyond (World Scientific 2004)

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# MSc Astrophysics in Bonn

# Master of Astrophysics

Rheinische Friedrich-Wilhelms-Universität Bonn

(valid from WS 2014/2015)

|         |  | Course Phase   |  |                                       |      |   |       |                                      |      |   |  |
|---------|--|--|--|---------------------------------------|------|---|-------|--------------------------------------|------|---|--|
|         |  | Compulsory   |  |                                       |      |   |       | Elective                             |      |   |  |
| 1. Sem. | Oct  |  |  | astro608:<br>Theoretical Astrophysics | 7 cp | astro810/811:<br>Stars and Stellar<br>Evolution | 6 cp  | astro810/812:<br>Cosmology           | 6 cp | Elective Advanced<br>Lectures<br>(at least 18 cp out of<br>astro84 and astro85) |  |
|         | Nov  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Dec  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Jan  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Feb  |  |  |                                       |      |   |       |                                      |      |   |  |
| Mar     | physics601:<br>Advanced Laboratory<br>Course |  |  |                                       |      |   |       |                                      |      |   |  |
| 2. Sem. | Apr  |  |  | astro830:<br>Seminar                  | 4 cp | astro820/821:<br>Astrophysics of Galaxies       | 6 cp  | astro820:<br>Physics<br>Interstellar |      |   |  |
|         | May  | 7 cp   |  |                                       |      |   |       |                                      |      |   |  |
|         | June   |  |  |                                       |      |   |       |                                      |      |   |  |
|         | July   |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Aug  |  |  |                                       |      |   |       |                                      |      |   |  |
| Sep     |  |  |  |                                       |      |   |       |                                      |      |   |  |
|         |  | Research Phase   |  |                                       |      |   |       |                                      |      |   |  |
| 3. Sem. | Oct  | astro940:<br>Scientific Exploration of the Master thesis topic |  |                                       |      |   | 15 cp | Methods a                            |      |   |  |
|         | Nov  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Dec  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Jan  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Feb  |  |  |                                       |      |   |       |                                      |      |   |  |
| Mar     |  |  |  |                                       |      |   |       |                                      |      |   |  |
| 4. Sem. | Apr  | astro960:<br>Master Thesis                                     |  |                                       |      |   |       |                                      |      |   |  |
|         | May  |  |  |                                       |      |   |       |                                      |      |   |  |
|         | June   |  |  |                                       |      |   |       |                                      |      |   |  |
|         | July   |  |  |                                       |      |   |       |                                      |      |   |  |
|         | Aug  |  |  |                                       |      |   |       |                                      |      |   |  |
| Sep     |  |  |  |                                       |      |   | 30 cp |                                      |      |   |  |

Senior-Prof. Dr. Peter Schneider

*Astrophysik, Studienberater Master Astrophysik*

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3.003

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**Any questions for now?**

