

**Universität
Basel**

Departement
Pharmazeutische Wissenschaften



Guidelines “PhD Program for Pharmaceutical Sciences”
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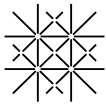
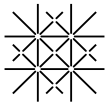


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1 Scientific Content and Program Objectives

The pharmaceutical sciences focus on the discovery, development, manufacture, mode of action, application and safety of drugs. The fields of research at the Department of Pharmaceutical Sciences (DPhW) range from the discovery and optimization of active ingredients, their effects and possible side effects, to the production of suitable pharmaceutical forms and their testing and application. The DPhW currently consists of the following research groups:

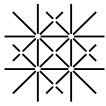
- Biopharmacy (Prof. Dr. Henriette Meyer zu Schwabedissen)
- Clinical Pharmacology & Toxicology (Prof. Dr. Matthias Liechti)
- Clinical Pharmacy & Epidemiology (Prof. Dr. Christoph R. Meier)
- Computational Pharmacy (Prof. Dr. Markus Lill)
- Molecular & Systems Toxicology (Prof. Dr. Alex Odermatt)
- Molecular Pharmacy (Prof. Dr. Daniel Ricklin)
- Nanopharmaceutical and Regulatory Science (Prof. Dr. Scott McNeil)
- Pharmaceutical Biology (Prof. Dr. Robin Teufel)
- Pharmaceutical Care (Prof. Dr. Samuel Allemann)
- Pharmaceutical Technology (Prof. Dr. Jörg Huwyler)
- Regulatory Toxicology (Prof. Dr. Martin E. Wilks)
- Translational Complementary Medicine (Prof. Dr. Carsten Gründemann)

With increasing diversification, there is a growing need to bundle the content of the doctoral education of the currently almost 100 doctoral students of the DPhW in a *PhD Program for Pharmaceutical Sciences*. The program is intended to create synergies and prepare PhD students for a career in science as well as for a later employment in clinics, authorities or in industry.

The doctoral program is structured in four curriculum areas (modules), which leave room for personal design according to the scientific focus.

1. Research Meetings
2. Seminars and Lectures
3. Transferable Skills
4. Service to Science and Education (elective module)

This structure places a strong focus on research ("Research Meetings"), mixed with in-depth technical content ("Seminars and Lectures") and the acquisition of a broad range of general skills ("Transferable Skills"). In addition, the "Service to Science and Education" module rewards and encourages the commitment and initiative of doctoral students (e.g. in teaching, conference organization or in scientific committees) through coordinative and financial support and the allocation of credit points.



2 Organisation and Processes

The PhD program "PhD-Program for Pharmaceutical Sciences" is administratively assigned to the Faculty of Science of the University of Basel and is part of the "Graduate School of Science".

The PhD program "PhD-Program for Pharmaceutical Sciences" has an executive board, a steering committee and program coordination.

The **executive board** is responsible for the strategic management of the doctoral program. Among other things, it determines the direction and approves the program and financial planning.

The executive board consists of all members of the department's executive committee (professors, study coordinator and general manager), the program coordinator and two elected representatives of the doctoral students.

The chairmanship of this committee (program head) is linked to the departmental representation of the Doctoral Board of the Faculty of Science. The doctoral student representation is elected by the doctoral students for a period of two years and confirmed by the executive board.

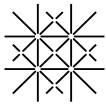
The **steering committee** is responsible for the operational management of the doctoral program. Among other things, it prepares and develops the curriculum, draws up the financial plan for the attention of the executive board and is responsible for evaluations and reporting. The steering committee is composed of the program coordinator, the program head, the study coordinator and the doctoral students' representatives.

The **program coordination** is responsible for the operative day-to-day business. The coordinator provides advice to all program managers and doctoral students and is the first point of contact for questions and suggestions. He or she is responsible for internal and external communication as well as for the preparation of evaluations and reporting. The program coordinator is appointed by the program head.

The detailed tasks of the individual organs are regulated in the rules of procedure ("Geschäftsordnung").

3 Admission Regulations

Doctoral students in "Pharmaceutical Sciences" and "Toxicology", as well as doctoral students in "Epidemiology" and "Pharmacology" with the first supervisor being associated to the DPhW are automatically admitted to the doctoral program, if they study according to the doctoral regulations ("Promotionsordnung") of September 15, 2015. Participation in the doctoral program is mandatory for new doctoral students of these doctoral subjects. This also applies to doctoral students who are externally affiliated, for example in research projects at USB, Swiss TPH or in industry. Doctoral students who are affiliated to another doctoral program are excluded. Participation in an international consortium program with cross-university doctoral training (e.g. Co-Tutelle/Joint Doctoral Degree Program of the EU) must be individually regulated. The admission will be noted on the Doctoral Agreement. A copy of the Doctoral Agreement is then sent by the doctoral candidate to the program coordinator.



Doctoral students are invited to a welcome event at the beginning of their doctoral studies. Participation in this event is important for networking and is expected.

Credit points are usually acquired by attending events or creating Learning Contracts (LC) in MOnA. The training content is determined in consultation with the supervisor. Participation in the doctoral program is explicitly listed in the Diploma Supplement of the doctoral degree.

4 Structure of the curriculum

To successfully complete the doctoral program, a total of 18 ECTS must be acquired. The curriculum is divided into four modules: "Research Meetings", "Seminars and Lectures", "Transferable Skills", and "Service to Science and Education", with the last module being an elective (see Table 1). The individual study plan is agreed upon at least annually between the doctoral students and their supervisors and documented in the protocol of the Doctoral Agreement.

The structure of the curriculum is in accordance with the PhD regulations of the Faculty of Science and the corresponding guidelines. Both documents are available on the website of the Faculty of Science.

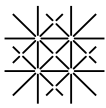
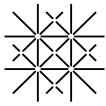


Table 1: Structure of the curriculum of the PhD Program for Pharmaceutical Sciences

Module / Course	ECTS (per course / total)		Registration
1. Research meetings	Max. 10 ECTS		
Annual Research Meeting (poster / talk)	1	Max. 2	LC
Conferences / symposia with contribution (poster / talk)	1-2	Max. 3	LC
Conferences / symposia without contribution (min. 3 days)	1	Max. 1	LC
Research Group Seminars	1	Max. 4	MOOnA
Summer Schools	1-3	Max. 3	LC
PhD Retreats (poster or presentation)	1	Max. 3	LC
Lab Visits for learning new research method (min. 3 days)	1	Max. 3	LC
2. Scientific lectures and seminars	Max. 8 ECTS		
Seminars on Drug Sciences (SDS)	1	Max. 4	MOOnA
Graduate Program Biozentrum	specified	Max. 8	MOOnA
Graduate Program in Drug Sciences	specified	Max. 8	MOOnA
Courses in Health Sciences	specified	Max. 8	MOOnA
Eurotox Courses	specified	Max. 8	LC
Other (specified with supervisor)	specified	Max. 8	MOOnA / LC
3. Transferable Skills	2 - 4 ECTS		
Transferable Skills courses offered by the University of Basel (unibas.ch/transferableskills) or other organisations	specified	Max. 4	Uni website / MOOnA / LC
4. Service to Science and Education	Max. 3 ECTS		
Training and supervision of undergraduate students	1-2	Max. 3	LC
PhD Association Committee member	1-2	Max. 2	LC
PhD student representative in academic committees	1	Max. 2	LC
Organization of activities (e.g., retreats, journal club, symposia)	1-3	Max. 2	LC
Other (specified with supervisor)	specified	Max. 3	LC



4.1 Research Meetings (Max. 10 ECTS)

The main focus of the doctoral program is the promotion of research skills and scientific dialogue. Each research group, alone or in cooperation with other research groups, offers its own research seminar in which research projects are discussed. Doctoral students also have the opportunity to present their work/projects once a year to the DPhW as well as to researchers from other departments or faculties at the "Annual Research Meeting" (poster or lecture). The program also supports participation in conferences, research visits, and participation in retreats and summer schools. Credit points are awarded by means of Learning Contracts according to the specifications of the Faculty of Science.

4.2 Scientific Lectures and Seminars (Max. 8 ECTS)

An important part of the doctoral program is the professional training of doctoral students. To this end, they attend lectures and seminars at the University of Basel or other universities. In the sense of an interdisciplinary education, and considering the broad range of topics within the DPhW, lectures and seminars from the current curricula of the Master's program in Drug Sciences as well as from the Graduate Teaching Program of the Biozentrum and the School of Health Sciences planned by the Medical Faculty are recommended. In addition, new events, workshops, and guest lectures are planned, which will be offered in the context of the doctoral program.

4.3 Transferable Skills (2 – 4 ECTS)

In addition to the professional training, the doctoral program also includes courses for acquiring interdisciplinary skills. These "transferable skills" are to be understood as a toolbox for an academic career (scientific presentations, scientific writing, etc.) or for a career outside the university (leadership seminars, communication training, etc.). Doctoral students can choose courses from the GRACE program, the continuing education program of the University of Basel and other universities, as well as external continuing education programs.

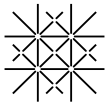
4.4 Service to Sciences and Education (Max. 3 ECTS)

The doctoral program aims to provide an incentive for doctoral students to become involved in teaching and scientific governance and specifically encourages their own initiative. This includes involvement in the PhD Association of the DPhW as well as the organization of retreats, workshops, symposia or similar events. The commitment to the DPhW (e.g. teaching participation, internship supervision, commission memberships) is also rewarded.

5. Support and other Assistance Measures

The doctoral program offers excellent professional and interdisciplinary support. The supporting bodies and measures include:

- **Doctoral committee:** Doctoral students are accompanied by a doctoral committee for the duration of their PhD studies. The doctoral committee consists of two representatives of Group I or Group II of the Faculty of Science and one external expert. There is an annual meeting in which the content of the training is determined and career questions are addressed.



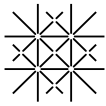
- **Program Coordination:** The Program Coordination is available as a further contact point for general questions as well as for individual program items. The Program Coordination also supports the dialogue between doctoral students in the sense of peer mentoring. He or she is also the first point of contact for feedback on the doctoral program.
- **Group seminars:** Doctoral students take part in a group seminar organized by their research group. The meetings take place 1-2 times a week. Current research projects and ideas are discussed and presented. The group seminars allow direct feedback from the group leader as well as from own peers. Group seminars can also be organized across research groups.
- **Annual Research Meeting:** In order to provide feedback to doctoral students on a larger scale, the DPhW organizes a one-day research conference once a year. Doctoral students present their research results at this conference at least twice and receive one credit point for two participations/presentations.
- **Academic self-administration:** Doctoral students are organized in a PhD Association, which is headed by the Associations own PhD Representatives. The program cooperates with the PhD Association and provides advice and assistance together with the program coordination.
- **Lab & Site Visits:** Due to the high value of national and international collaborations, doctoral students are encouraged to complete research stays. They are supported in contacting potential hosts and in applying for funding. Doctoral students also have the opportunity to earn credit points if they can demonstrate that they have learned a new research method during this visit (defined by Learning Contracts).

6. Quality concept

Quality assurance for the training of doctoral students is the responsibility of the doctoral committee. Progress is discussed at the meetings, which take place at least once a year, and binding goals and measures for achieving these goals are defined.

The executive board and the steering committee are responsible for the quality assurance of the program as a whole. While the steering committee is responsible for the overall decisions, the steering committee meets at more regular intervals. These meetings provide a platform for new ideas and developments. Courses offered are also evaluated by means of a questionnaire. Evaluations are discussed in the steering committee and concrete measures are decided upon.

Reporting by doctoral students is another important component of the doctoral program. It is used to record various key figures such as the number of doctoral students, the number of completed doctoral procedures, the duration of the doctoral period, the type and amount of funds or scholarships acquired, as well as information on publications. In addition, at the end of each semester doctoral students compile an overview of their activities in connection with the doctoral program. The program coordination is responsible for collecting these data.



The doctoral program as a whole is internally evaluated every three years. For this purpose, evaluations of the data collected by the program coordination are submitted to the steering committee. In addition, doctoral students are asked about their satisfaction with the program, subjective demands and support, and their perceived involvement in the program.

7. Contact

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