

The English version of the curriculum for the „Doctor of Philosophy Programme Biology“ is not legally binding and is for informational purposes only. The legal basis is regulated in the curriculum published in the University of Innsbruck Bulletin on 22 April 2009, issue 67, No. 259.

Decision of the Curriculum Committee of the Faculty of Biology on 30 March 2009, approved by Senate Decree on 16 April 2009:

On the basis of § 25 para. 1 no. 10 University Organisation Act 2002, BGBl. I (Federal Law Gazette) No. 120, most recently amended by Federal Law BGBl. I (Federal Law Gazette) No. 134/2008 and § 32 Section "Regulations of Study Law", republished in the University of Innsbruck Bulletin of 3 February 2006, Issue 16, No. 90, most recently amended by the University of Innsbruck Bulletin of 7 May 2008, Issue 42, No. 272, the following is decreed:

## Curriculum for the **Doctor of Philosophy Programme Biology** at the Faculty of Biology of the University of Innsbruck

### **§ 1 Qualification profile and program objectives**

- (1) The Doctor of Philosophy Programme Biology belongs to the group of studies in the natural sciences.
- (2) The Doctor of Philosophy Programme Biology builds on diploma, Magister and master programs and serves to educate and train junior scientist in the different special fields of biology. The Doctor of Philosophy Programme Biology promotes a goal-oriented scientific qualification, without curtailing the individual's research impetus and creativity.
- (3) Through their submission of an original piece of scientific work, graduates make a contribution to widening the boundaries of knowledge in their discipline. This scientific work – the dissertation – is the core element of the doctoral program and in all aspects can withstand the scrutiny of colleagues in the international scientific community.
- (4) Graduates of the Doctor of Philosophy Programme Biology are able to work on issues in the natural sciences on a high level of expertise and in an independent and creative way. They employ modern methods and integrate the current state of knowledge in the respective field. Equally, the analysis and interpretation of results correspond to the highest standards.
- (5) Graduates of the Doctor of Philosophy Programme Biology have a both comprehensive and detailed knowledge of their research disciplines and are familiar with related areas of knowledge. In addition to subject-specific knowledge, they acquire key qualifications that enable them to adapt to fast-changing requirements. They acquire a high level of subject and method competence and train the general scientific and communicative skills necessary for successful scientific careers in the academic, private and in the public sector. These skills include the ability to independently present and discuss scientific findings in national as well as international scientific forums. They are able to critically analyze their own scientific results, those of others, as well as concepts and experiments. Moreover, students acquire the skill to publish scientific results in a suitable form (especially in international scientific journals).

- (6) During the doctoral programme, student mobility is supported, which makes it possible for doctoral students to integrate into national and international scientific networks.
- (7) Graduates of the Doctor of Philosophy Programme Biology have learned to apply and adhere to quality controls, as well as scientific and ethical standards in their work.
- (8) Mostly, occupational activities will include scientific and managerial careers in private and public enterprises and institutions. In particular, this includes research and teaching activities at universities and other national and international research institutions.
- (9) Doctoral or research projects can develop into programmes which are subsidized by an acknowledged national or international research funding institution and whose project leader is the main supervisor.

## § 2 Length and scope

The Doctor of Philosophy Programme Biology takes three years (six semesters), which equals 180 ECTS credits.

## § 3 Admission

- (1) Valid proof of the necessary academic level for admission to the doctoral programme must be provided. This includes proof of completion of relevant diploma or master programmes, of completion of relevant diploma or Magister programmes at a university of applied science or completion of other equivalent studies at an accredited Austrian or non-Austrian post-secondary educational institution. If equivalency is given in principle, and only a few elements are missing for full equivalency, the rector's office is entitled to combine the determination of equivalency with the obligation to pass certain examinations in the course of the doctoral programme.
- (2) Relevant studies are in any case the Diploma Programme Biology at the University of Innsbruck and all Magister and master programmes at the Faculty of Biology of the University of Innsbruck.

## § 4 Types of courses and maximum number of students per course

- (1) Lectures (VO) are courses where lecturers present and explain significant content and schools of thought of a special area (no maximum number of participants).
- (2) Courses with continuous performance assessment:
  1. **Lectures with integrated practical parts (VU):** integrated courses where lecture parts are combined with practical parts. Maximum number of participants: 6
  2. **Seminar (SE):** In guided self-study programmes - including lecture presentations, written contributions and/or scientific discussions - students reflect on subject matter and methods of a special area. Maximum number of participants: 12
  3. **Workshop (WS):** Workshops are courses where knowledge and experiences are exchanged so that participants can learn from each other and develop joint strategies for problem solutions. Maximum number of participants: 12

## § 5 Procedure for the allotment of places in courses with a limited number of participants

Students whose study time will be prolonged if they are not admitted are to be given priority.

## § 6 Mandatory modules

The following modules – equal to 60 ECTS credits - are mandatory:

1	<b>Mandatory Module: Tutelage of Scientific Working</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	Students are introduced to the current state of knowledge and central methods relevant for the dissertation topic.	-	10
	<b>Total</b>	-	10
	<b>Learning objectives of the module:</b> After the successful completion of this module, students have been introduced to the current state of knowledge in the field and know basic principles of the methods that can be employed in the dissertation.		
	<b>Admission requirements:</b> none		

2	<b>Mandatory Module: Analysis of Own and External Research Results</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
a	<b>SE Analysis of the Student's Own Research Results I</b>	1	2
b	<b>SE Analysis of the Student's Own Research Results II</b>	1	2
c	<b>SE Analysis of the Research Results of Others</b>	1	2
d	<b>WS Presentation of the Student's Own Research Results</b>	2	4
	<b>Total</b>	5	10
	<b>Learning objectives of the module:</b> After completion of this module, students are familiar with the relevant literature in their special field. They are able to adequately present their own research results and those of others both visually and orally. Moreover, they have learned to recognize, formulate, and discuss issues and questions of a theoretical or methodological nature; as a result, they can develop their own research strategies.		
	<b>Admission requirements:</b> none		

3	<b>Mandatory Module: Presentation of Own Research Results</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	Presentation of the student's research results at national and/or international conferences or publishing them in international scientific journals; the presentations or publication in question may not be a part of the dissertation according to § 7 (3).	-	10
	<b>Total</b>	-	10
	<b>Learning objectives of the module:</b> After completion of this module, students are able to present research results in national or international forums, to analyze and critically assess their own research performance and that of others, and to recognize the strengths and weaknesses of their own research. Students acquire didactic skills which enable them to clearly present their research results to both		

	laypeople and experts and to explain complicated correlations in a clearly understandable manner.
	<b>Admission requirements:</b> none

4	<b>Mandatory Module: Statistics</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	<b>VU Advanced Statistics</b>	2	4
	<b>Total</b>	2	4
	<b>Learning objectives of the module:</b> After completion of this module, students are able to create complex experimental designs and are familiar with advanced statistical and graphical methods of analysis.		
	<b>Admission requirements:</b> none		

5	<b>Mandatory Module: Scientific Writing</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
a	<b>VU English for Scientific Purposes</b>	2	4
b	<b>VU Scientific Writing I</b>	1	2
c	<b>VU Scientific Writing II</b>	1	2
	<b>Total</b>	4	8
	<b>Learning objectives of the module:</b> After completion of this module, students have acquired the linguistic skills required in the international discourse of the natural sciences. Additionally, students learn about the concept, IMRAD structure, design, and finalization of English-language publications.		
	<b>Admission requirements:</b> none		

6	<b>Mandatory Module: Scientific Basics/Core Skills of the Thesis Topic</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	Courses, as defined in the dissertation agreement, equal to 8 ECTS credits have to be completed to develop the scientific basis/core competences for the dissertation topic.	-	8
	<b>Total</b>	-	8
	<b>Learning objectives of the module:</b> After successful completion of this module, students possess the high level of subject-specific knowledge necessary for working on the dissertation.		
	<b>Admission requirements:</b> as defined in the respective curricula		

7	<b>Mandatory Module: Generic Skills</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	Courses, as defined in the dissertation agreement, equal to 5 ECTS credits have to be completed. One course must be chosen from the field of "Equality and Gender". Suitable options are marked in the course catalog.	-	5
	<b>Total</b>	-	5
	<b>Learning objectives of the module:</b> After successful completion of this module, students possess knowledge, skills, and competences in selected disciplines beyond the core area of their dissertation which are important for their future careers.		
	<b>Admission requirements:</b> none		

8	<b>Mandatory Module: Doctoral Thesis Defense</b>	<b>Sem. hours</b>	<b>ECTS credits</b>
	Final, public oral dissertation defense	-	5
	<b>Total</b>	-	5
	<b>Learning objectives of the module:</b> Presentation, reflection on, and analysis of the dissertation results in the overall context of the doctoral study programme; the focus is on summarizing and explaining results of the research project, on presenting the increase in knowledge for the discipline, on demonstrating evaluation and method competences, as well as on presenting the results.		
	<b>Admission requirements:</b> positive completion of all other modules and positive evaluation of the dissertation		

## § 7 Dissertation

- (1) In the course of the Doctor of Philosophy Programme Biology, a dissertation has to be written, which equals 120 ECTS credits. The dissertation is a scientific piece of work which – in contrast to a diploma or master thesis – serves to prove the student's ability to cope with scientific questions in an independent way.
- (2) The dissertation topic has to show a meaningful relationship to one of the master programmes offered at the Faculty of Biology of the University of Innsbruck.
- (3) The dissertation can also consist of articles that are related in terms of subject matter or methods. The following quality criteria apply:
  1. The dissertation has to consist of a minimum of three articles that have been accepted for publication by acknowledged scientific journals or have been accepted for presentations at acknowledged scientific conferences.
  2. Additionally, the student has to write an extensive summary of the subject area, the methods employed, and the results he/she has obtained; in doing so, the student must refer to the manuscripts included in the dissertation.
  3. If the articles were written by several authors, the student's own contribution must be shown clearly and added to the dissertation.

- (4) The student has to propose a team of supervisors, consisting of at least two people (dissertation committee), and to nominate one of them as the supervisor mainly responsible. It is permissible to propose supervisors (with the exception of the main supervisor) from subject-related fields. In justifiable exceptional cases it is possible for students to propose only one supervisor.
- (5) The student has to communicate the dissertation topic and names of the supervisors in writing to the Director of Studies prior to beginning the work. Topic and supervisors are considered as accepted, if the Director of Studies does not veto them by means of a decree within one month after the receipt of the proposal.

## **§ 8 Examination regulations**

- (1) The evaluation of Modules 2, 4, 5, 6, and 7 is based on course examinations.
  - 1 Lectures are evaluated by means of a single exam at the end of the course. The lecturer is required to communicate evaluation methods and criteria (oral and/or written) before the course starts.
  2. The evaluation of courses with continuous performance assessment is based on the student's regular, written and/or verbal and/or experimental contributions. The lecturer is required to communicate evaluation methods and criteria before the course starts.
- (2) Mandatory Modules 1 and 3 are evaluated by the main supervisor on the basis of a performance report written by the student. A positive grade has to read "participated with success"; a negative grade has to read "participated without success".
- (3) The evaluation of Mandatory Module 8 - "Dissertation Defense (final oral exam)" - is based on an oral exam taken before an examination board.

## **§ 9 Academic degree**

Graduates of the Doctor of Philosophy Programme Biology are awarded the academic degree of "Doctor of Philosophy" or "PhD", in brief.

## **§ 10 Implementation**

This curriculum comes into force on 1 October 2009.

For the Curriculum Committee:  
Ao. Univ.-Prof. Mag. Dr. Paul Illmer

For the Senate:  
Univ.-Prof. Dr. Ivo Hajnal