

## FORMAL REQUIREMENTS AND ADMINISTRATION OF DOCTORAL STUDIES

Version: Released and applicable since the 1<sup>st</sup> August 2019 (last updated: February 2022)

Ph.D. programme: **Ecological and Evolutionary Biology (Ekologická a evoluční biologie)**

Guarantor/Doctoral Board head contact: **Michal Horsák**, [horsak@sci.muni.cz](mailto:horsak@sci.muni.cz)

### General outline:

- **Semesters 1-4 (first 2 years of study):** students work on their research project and fulfil other requirements (i.e., theoretical courses, preparing for state doctoral exam, teaching assistance)
- **End of 4th semester:** SDE (State Doctoral Exam)\*
- **Semesters 5-8:** main focus on research (work on doctoral project and thesis, publications, presentations at conferences, etc.)

### General requirements for all students in the programme (please see detailed requirements for the Individual Study Plan in this table):

Mandatory duties: *checked by Dean's Office*

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| <b>XD100</b>            | <b>Ph.D. thesis / Příprava dizertační práce</b>                            | <i>Enrolled every semester during the entire studies; recommended 20-25 ECTS for semesters 1-4, 30 ECTS for semesters 5-8, 20 ECTS for semesters 9 +</i>  |
| <b>Bi0807 or Bi9656</b> | <b>Zoological or Botanical seminar and one of the specialized seminars</b> | <i>Enrolled in semesters 1-8 (except during stays abroad)<br/>Select one of the specialized seminars: Bi9666 or Bi9678 (Botanical), Bi7801 (Hydrobiological), Bi5027 (Vertebrateology), Bi6479 (Parasitology), Bi4007 (Vertebrateology)</i>   |
| <b>C7777</b>            | <b>Handling chemical substances / Zacházení s chemickými látkami</b>       | <i>Enrolled every year of studies, every autumn semester</i>  |
| <b>XD102</b>            | <b>Teaching Assistance / Pomoc při výuce</b>                               | <i>Enrolled 4-times in semesters 1-4, maximum 150 hours in total (recommended 0 ECTS)</i>   |
| <b>XD106</b>            | <b>Lecture in the foreign language / Odborná přednáška v cizím jazyce</b>  | <i>Minimum once during studies (recommended 0 ECTS)</i>   |
| <b>XD110</b>            | <b>Placement Abroad / Zahraniční pracovní pobyt</b>                        | <i>Minimum 2 months in total (usually 5 ECTS/month), requirement given by the law<br/>Instructions for recognition of Placement Abroad (the recognition is done via IS application Internship and Stays, by creating record of the stay and request for recognition; the course is then registered by Dean's Office): <a href="https://www.sci.muni.cz/en/students/go-abroad/recognition-of-stay-abroad">https://www.sci.muni.cz/en/students/go-abroad/recognition-of-stay-abroad</a></i> |

Theoretical courses and all other requirements: *checked by the Head of Specialization Board / Head of Doctoral Committee*

- **minimum 4 courses during semesters 1-4 with corresponding ECTS (before SDE)**

**(\*) Requirements for theoretical SDE:**

Theoretical preparation for SDE (in the middle of standard study duration). The Examining committee will check following aspects:

- 1/ proficiency in the **fundamentals of the broader scientific discipline**, i.e. research of interaction between environment and health (20% weight)
- 2/ deep **understanding of the particular scientific specialization** (30% weight)
- 3/ **detailed knowledge within the topic(s) of the doctoral research project** including context (50% weight)

| Individual study plan elements                                    |   | Milestones   |   |   |   |
|---|---|--|---|---|---|
|   |   | Enrolment to studies<br>(Before semester 1)  | End of Semester 1   | End of Semester 4<br>(Theoretical State Doctoral Exam, SDE *)   | End of Semester 8<br>(Preparation for PhD defence)  |
| (A)<br>Research and development activities (ca. 50% of workload). | <b>1. Research, dissertation project</b> , literature search of the actual state of the topic, planning and the scientific activities itself (20%). | <p>Define framework topic of your PhD project with your supervisor for enrolment. Should contain the background, research hypothesis and objectives, approach-methods, timeline of foreseen activities, expected outcomes (publications).</p> <p><b>CHECK: Doctoral Board and boards of all specializations [entrance competition]</b></p> <p><i>C7777 - every year of study, every autumn semester</i></p> <p><b>- CHECK: Dean's office</b></p> | <p>Detailed study plan for your PhD work needs to be filled in IS.MUNI. Define main goals, timeline of foreseen activities, including data collection, methods, presentations, expected outcomes (publications).</p> <p><b>CHECK: Supervisor, Specialization board head or selected members of the Specialization board</b></p> | <p>Prepare the review of the study topic (about 10 pages; text may later be used as an Introduction-Background to the final PhD thesis). Should optimally be written during the first year, depending on the supervisor's recommendation, but has to be delivered to the Chair of the examination committee at least a week before the State Doctoral Exam.</p> <p><b>CHECK: Supervisor, Examining committee [SDE assessment]</b></p> | <p>Submit PhD thesis according to instructions of Doctoral Board, format according to SCI MUNI requirements.</p> <p><b>CHECK: Dean's office</b></p> |

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|   | <p><b>2. Publications</b><br/>(theses should be based on three products demonstrating quality and scientific creativity of the student) (15%)</p>             | No formal check needed.  |   | <p>No formal check needed.</p> <p>Publications of the student may be included in the review of the study topic for SDE (if relevant).</p>   | <p><u>Minimum</u> criteria: two papers published or accepted in IF-journal (ISI WOS) and one manuscript submitted; at two out of these the candidate is the first author; all are related to the dissertation topic.</p> <p><b>CHECK: Supervisor, Defence committee [Thesis].</b></p> |
|   | <p><b>3. Presentation</b> of results on scientific seminars, symposia, conferences etc., including preparation of talks and/or poster presentations (5%).</p> | No formal check needed.  | <p>Introduction of the PhD project at Zoological or Botanical seminar. No formal check needed.</p> <p><b>CHECK: Student</b></p> | <p>No formal check needed.</p> <p>List of presentations may be included in the review of the study topic for SDE (if relevant).</p>   | <p>At minimum one documented oral presentation in English at an international conference.</p> <p><b>CHECK: Dean's office [XD106]</b></p>  |
| <p>(B)<br/>Specialized courses and theoretical preparation (20%).</p> | <p><b>4. Theoretical courses,</b> preparation to the state doctoral exam - SDE (15%).</p>   | <p>To identify student's knowledge gaps and what should be learned for SDE.<br/>Plan corresponding courses, trainings for the first two years. Consider courses at MU or outside. Minimum 4 credited courses are required. Selection can be changed/updated for each semester.</p> <p><b>CHECK: Supervisor</b></p> | No formal check needed.   | <p>Successfully pass at least 4 credited theoretical courses.</p> <p><b>CHECK: Specialization Board [IS.MUNI]</b></p> <p>Have all the other requirements fulfilled and submit <b>the application to theoretical SDE</b> (Doctoral Board organizes SDE further).</p> | <p>Not relevant anymore, all requirements fulfilled before.</p>   |

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|  | 5. <b>Doctoral seminars</b> (5%)  | Zoological or Botanical seminar and specialized seminars (obligatory for 8 semesters).<br><br><b>CHECK: Student</b>   | No formal check needed. | <b>CHECK: Dean's office [two seminars in each semester; choice of seminars based on supervisor's recommendations]</b> | Get credits for two seminars per semester for all semesters when student works at MU in Brno. Semesters when student is at international stay abroad are excluded.<br><b>CHECK: Dean's office [IS.MUNI]</b> |
| (C)<br>International experience and competitiveness (20%). | 6. <b>Further improving of English competences</b> (attending courses, seminars, conferences, writing publications, all in English). (5%) | No formal check needed.   | No formal check needed. | No formal check needed.   | No formal check needed  |
|  | 7. <b>Stay or internship abroad</b> - mandatory participation in international cooperation. (15%)   | No formal check needed.   | No formal check needed. | No formal check needed.   | Minimum is a two-month foreign stay, longer stays (3+ months) are preferred considering the topic.<br><br><b>CHECK: Dean's office [stay abroad in IS; e.g. XD110]</b>                                       |
| (D)<br>Pedagogical competences (10%).                      | 8. <b>Teaching assistance</b> - classrooms, exercises, advising undergrad students and comparable.  | Up to 150 hours through the entire doctoral studies. Passed during the first four semesters.<br><br><b>CHECK: Student, Guarantors of respective courses</b> | No formal check needed. | <b>CHECK: Dean's office [IS; XD102 for 4 semesters]</b>   | Not relevant anymore, all requirements fulfilled before.  |
| (E)<br>Other transferrable skills.                         | 9. <b>Career development</b> - preparation and management of projects, scientific writing, communication, other soft-skills.              | No formal check needed.   | No formal check needed. | No formal check needed.<br><br>Up to student's choice; can be included in the review of the study topic for SDE.      | No formal check needed.   |

**Recommended theoretical courses based on supervisor's recommendations:**

In the field of botany, zoology, hydrobiology, parasitology, ecology, palaeoecology, statistical analyses, and the others select preferentially from the master programs of Botany and Zoology; see:

[https://is.muni.cz/predmety/studijni\\_plan?plan\\_id=24806](https://is.muni.cz/predmety/studijni_plan?plan_id=24806)

[https://is.muni.cz/predmety/studijni\\_plan?plan\\_id=23746](https://is.muni.cz/predmety/studijni_plan?plan_id=23746)