

FORMAL REQUIREMENTS AND ADMINISTRATION OF DOCTORAL STUDIES

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PhD programme: **Biochemistry/Biochemie**

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General outline:

- **Semesters 1 - 4 (first 2 years of study)** - students work on their research project + fulfil other requirements (theoretical courses, preparing for state doctoral exam – SDE*, teaching assistance)
- **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 the detailed table below):

Mandatory courses: *checked by Dean's Office*

CDB100	Ph.D. thesis /Příprava dizertační práce	<i>Enrolled every semester during entire studies, recommended 20-25 ECTS for semesters 1-4, 30 ECTS for semesters 5-8, 20 ECTS for semesters 9 +</i>
CDB0x	Programme seminar /Oborový seminář	<i>Obligatory for all 8 semesters of standard study duration. This requirement can be reduced accordingly in the case of a long-term internship abroad or when the student intends to finish his/her studies earlier than in 4 years.</i>
C7777	Handling chemical substances /Zacházení s chemickými látkami	<i>Enrolled every year of study, every autumn semester</i>
CBD102	Teaching Assistance /Pomoc při výuce	<i>Assistance in a one-semester laboratory course held at the Department of Biochemistry (2 ECTS)</i>
XD106	Lecture in the foreign language /Odborná přednáška v cizím jazyce	<i>Minimum once during studies (recommended 0 ECTS)</i>
	Placement Abroad /Zahraniční pracovní pobyt	<i>Minimum 1 month stay, min. 1-time during studies (usually 5 ECTS/month), requirement given by law Instructions for recognition of Placement Abroad: https://www.sci.muni.cz/en/students/phd/recognition-of-placements-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)</i>

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

- minimum 4 during semesters 1-4. Passing the courses is required for application to the state doctoral examination (*)

Requirements for theoretical SDE*:

Theoretical courses

The student with the agreement of his/her supervisor, selects courses from among those offered by the Faculty of Science, faculties or other units within the university. Master level courses can only be taken if these were not a part of the student's master degree. External courses that are credited and terminated by an examination are also acceptable upon approval by doctoral board. In exceptional case, individual literature study of specific topics relevant to the thesis work that are not covered by existing courses, terminated by an examination, can be included and considered to be equivalent to one regular course (CDB101).

(*) State doctoral examination

The state doctoral examination is designed to verify the student's general knowledge in the field and acquaintance with scholarly methods of research. A month before the examination, the student is assigned three different examination topics to study for beforehand. The examination has the form of a one-hour interview between the doctoral student and the members of the committee. The committee announces the assessment of the examination obtained by secret voting immediately after the examination has been completed. A student who successfully passes the state examination can then advance to the dissertation defence which takes place the same day or at a later date.

Individual study plan elements		Milestones			
		Enrolment to studies (Before semester 1)	End of Semester 1	End of Semester 4	End of Semester 8 (Preparation for PhD defence)
(A) research and development activities (ca. 70 % of workload)	1. Research, dissertation project, literature search of the actual state of the topic, planning and the scientific activities itself (50%).	Define framework topic of your PhD project with your supervisor for enrolment. CHECK: Dean's office [enrolment] CDB100 for each semester (25 ECTS for semesters 1-4, 30 ECTS for semesters 5-8, 20 ECTS for semesters 9+] CHECK: Dean's office	Submit a research project that includes background literature review, research hypothesis, objectives, proposed methodology and time schedule (CDB104) CHECK: Doctoral Board [CDB104]	No formal check needed	Submit PhD thesis according to instructions of Doctoral Board, format according to SCI MUNI requirements CHECK: Doctoral Board, Dean's office
	2. Publications (thesis should be based on at least one first author research paper demonstrating quality and independence of the student (15%)	No formal check needed	No formal check needed	No formal check needed	The minimum requirement is one research paper published in a journal from the first or second quartile (Q1 or Q2) of impact factor according to ISI Web of Knowledge. A possible but not preferred alternative are two thematically related papers published in less ranked journals (Q3 or Q4). The student must be the first author of at least one publication and must always state Department of Biochemistry as

					affiliation (co-affiliation to another institution is possible). CHECK: Doctoral Board [Thesis].
	3. Presentation of results on scientific seminars, symposia, conferences etc., including preparation of talks and/or poster presentations (5%)	No formal check needed	No formal check needed	No formal check needed	At minimum one documented oral presentation in English to appropriate scientific audience, preferentially international conference. CHECK: Dean's office [XD106]

(B) Specialized courses and theoretical preparation (20%)	4. Theoretical courses , preparation to the state doctoral exam – SDE (15%)	Identify student’s knowledge gaps and what should be learned for SDE. 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. CHECK: Supervisor	No formal check needed	Successfully pass at minimum 4 theoretical courses. CHECK: Dean’s office [IS.MUNI] Having all other requirements fulfilled (see below in this column) you can submit the application to theoretical SDE (Doctoral Board organizes SDE further).	Not relevant anymore, all requirements fulfilled before.
	5. Doctoral seminars and PhD conferences (5%)	Enroll CDB0x (obligatory seminar for 8 semesters) CHECK: Student	No formal check needed	Presentation of the progress of thesis work at the seminar and annual PhD conferences. CHECK: Dean’s office [4 semesters of CDB0x]	Get credits for CDB0x for all semesters when student works at MU in Brno. Semesters when student is on an internship abroad are excluded. CHECK: Dean’s office [IS.MUNI]
(C) International experience and competitiveness	6. Further improving of English competences (attending courses, seminars, conferences, writing publications, all in English).	No formal check needed	No formal check needed	No formal check needed	No formal check needed CHECK: Dean’s office [XD106]

	7. Stay or internship abroad - mandatory participation in international cooperation.	No formal check needed	No formal check needed	No formal check needed	Minimum is 1 month foreign stay, longer stays (3+ months) are preferred considering the topic. CHECK: Dean's office [stay abroad in IS; XD110]
(D) Pedagogical competences	8. Teaching assistance	No formal check needed	No formal check needed	Assistance in a one-semester laboratory course CHECK: Dean's office [IS; CDB102 minimum 2 ECTS]	Not relevant anymore, all requirements fulfilled before.
(E) Other transferrable skills.	9. Career development - preparation and management of projects, scientific writing, communication, other soft-skills.	No formal check needed Check offers of PHD TRAINING SCHOOL and outside of MU CHECK: Student	No formal check needed	No formal check needed	No formal check needed