

FORMAL REQUIREMENTS AND ADMINISTRATION OF DOCTORAL STUDIES

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PhD programme: **Genomics and Proteomics (Genomika a proteomika)**

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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 duties: *checked by Dean's Office*

XD100	Ph.D. thesis / Příprava dizertační práce	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 +
C9950	FGP seminar / Seminář oddělení FGP	Obligatory for all 8 semesters of standard study duration (with exception of stay abroad)
C7777	Handling chemical substances / Zacházení s chemickými látkami	Enrolled every year of study, every autumn semester
XD102	Teaching Assistance / Pomoc při výuce	Maximum 150 hours total during studies – 4-times XD102 (zero ECTS) during semesters 1-4.
XD106	Lecture in the foreign language / Odborná přednáška v cizím jazyce	Minimum once during studies (recommended 0 ECTS)
	Placement Abroad / Zahraniční pracovní pobyt	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/go-abroad/recognition-of-stay-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)

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

- **minimum 4 courses during semesters 1-4 (before theoretical doctoral exam, SDE*)**

(* Requirements for theoretical SDE:

Theoretical preparation for SDE. The Doctoral Board will check following aspects:

- professional orientation in the field of genomics and proteomics and other related disciplines (particularly in molecular and cellular biology, structural biology, bioinformatics, and in the experimental approaches used in the field - 30% weight)
- deep understanding to the particular scientific specialization, including being familiar with recent major publications in the field of expertise (30% weight),
- detailed knowledge within the topic(s) of the doctoral research project including context (40% weight).

Individual study plan elements		Milestones			
		Enrolment to studies (Before semester 1)	End of Semester 1	End of Semester 4 (Theoretical State Doctoral Exam, SDE *)	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] XD100 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 detailed "research project" for the PhD work to the Doctoral Board. Max 1 page describing background, objectives, methods, and timeline (with activities and outcomes). CHECK: Doctoral Board [Submitted project]	Present thesis progress at the C9950 FGP seminar (or other related seminar) in English CHECK: Supervisor and Doctoral Board	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 papers demonstrating quality and independence of the student (15%)	No formal check needed	No formal check needed	No formal check needed	At least one student's first-author paper published in IF-journal, preferentially in 1st or 2nd quartile (ISI WOS). 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 credited theoretical courses. CHECK: Dean’s office [IS.MUNI]	submit the application to theoretical SDE CHECK: Doctoral Board (organize SDE)
	5. Doctoral seminars (5%)	Enroll C9950 (obligatory seminar for 8 semesters) CHECK: Student	C9950 (obligatory seminar) CHECK: Dean’s office	CHECK: Dean’s office [4 semesters of C9950]	Get credits for C9950 for all semesters when student works at MU in Brno (or relevant seminar elsewhere). Semesters when student is at international stay 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	CHECK: Dean’s office [XD106]

	7. Stay or internship abroad - mandatory participation in international cooperation.		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; e.g. XD110]
(D) Pedagogical competences	8. Teaching assistance - classrooms, exercises, advising undergrad students and comparable.	Less than 150 hours through the entire doctoral studies. Passed during first four semesters. CHECK: Student	No formal check needed	No formal check needed	CHECK: Dean's office [IS; XD102 for 4 semesters]
(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

Recommended theoretical courses

CG020/CG920 Genomika/Genomics + (C7301 – cvičení)

CG010/CG910 Proteomika/Proteomics + (C8302 – cvičení)

Bi5000 Bioinformatika

C9041 Struktura a funkce eukaryotických chromozomů + (C9042 – praktikum)

C9530 Strukturní biochemie + (C9531 – seminar)

CG030 Struktura a funkce proteinových komplexů + (CG031 – cvičení)

C7250 Charakterizace proteinů hmotnostní spektrometrií + (C7350 – cvičení)