



Student Handbook

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International Max Planck Research School for Brain and Behavior

www.IMPRS-Brain-Behavior.mpg.de



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This handbook is designed to serve as a guide for PhD students within the IMPRS for Brain and Behavior. It covers the requirements for degree completion from both academic partners of the IMPRS, Florida Atlantic University and University of Bonn. In addition to the requirements of the academic partners, the IMPRS requires certain milestones to be reached by candidates for successful completion of the structured research program.

General Requirements

IMPRS Brain and Behavior students and faculty must abide by the rules and guidelines established by the degree granting institution in which they are enrolled, the research institute where they conduct their research under the guidance of their mentoring Principal Investigator (PI) and the official "Guidelines for doctoral education and training at Max Planck Institutes". It is the student's responsibility to read and understand these rules.

IMPRS Requirements

Please note: Failure to comply with program requirements and Milestones will result in loss of good standing with the program.

- 1) Students must apply to and be accepted to one of the following university degree programs: Florida Atlantic University Integrative Biology and Neuroscience PhD, University of Bonn Dr. rer. nat. from the Faculty of Mathematics & Natural Sciences, or University of Bonn PhD from the Faculty of Medicine.
- 2) Short-Course participation: All students must attend the courses offered alternately in Bonn or in Florida.
- 3) Research Lecture participation: All students must attend at least eight lectures per semester. Students can choose topics of interest from the various lecture series offered by local partner institutions.
- 4) Presentation of Research: Students should give a presentation of their research in their 3rd year or beyond. Venues for this presentation might be the Sunposium, BonnBrain³ meeting, or other appropriate symposium. Both talk or poster presentation formats are acceptable.
- 5) PhD seminar: Students must present a 15 minute update on their research progress annually in a student symposium.
- 6) Advance Training Workshop participation: Students must attend one workshop on their home campus during the second and third year. Students can choose from a range of offerings.
- 7) Soft Skills Workshop participation: Students must attend one workshop on their home campus during the second and third year. Topics include Scientific Writing, Scientific Presentation, and Professional Ethics, or others as appropriate.

- 8) Designation of Thesis Advisory Committee (TAC): A thesis committee must be formed within three months of matriculation into the IMPRS program. This committee agrees to advise and monitor the student on their research goals and progress during the course of the doctoral work. Formation of the committee is the first milestone that the student must meet. Composition of the TAC should be determined in consultation with the PI to match the expertise of the TAC to the questions of the research proposal. The committee should be composed of four or more faculty members including the mentoring Principal Investigator; in the case of students pursuing a degree from the University of Bonn, the TAC may be composed of different members than the eventual thesis dissertation committee (see Degree Requirements, Uni Bonn 1.c and 2.c below). Each degree-granting program has specific additional requirements regarding the composition of the thesis committee. It is the joint responsibility of the student and mentoring PI to be aware of and comply with these requirements.
- 9) Thesis Proposal: The first meeting of the thesis committee must be within four months of matriculation to IMPRS. The topic of the doctoral work should be presented and feedback received. The student will then compose an 8-10 page written Proposal of Doctoral Work. Satisfactory completion of this is a required milestone.
- 10) Thesis Progress Monitoring: Students should present their thesis progress annually to their thesis committee to demonstrate progress and discuss future direction. Following the TAC meeting, a written progress report incorporating the suggestions of the committee should be submitted. Satisfactory completion of this is a required milestone. If satisfactory progress is not made, the student must schedule an additional committee meeting within 6 months. Two consecutive failures to make satisfactory progress will result in termination of the student from the IMPRS program.
- 11) Publication requirement: Students are expected to submit their research findings for publication in peer-reviewed journals.
- 12) Thesis: Students are expected to produce an independent body of research on a well-focused topic. The thesis is the written culmination of this effort. Sufficient background should be included to place the student's research contribution in the context of the field of study. The data should be evaluated with statistical rigor, presented with thematic continuity, and discussed in light of current literature interpretations. Successful progression through the thesis research culminating in the written thesis is the top mentoring priority of the thesis advisor and thesis advisory committee. The quality of the research and thesis will be judged by the experts on the committee. The thesis formatting must follow the guidelines of the degree-granting institution.
- 13) Thesis Defense: The dissertation requirements are designated by the degree-granting programs. They share in common the submission of the written thesis and a public presentation of the thesis research. The student and mentoring principal investigator are responsible for understanding and following the respective procedures for dissertation defense for the appropriate degree-granting program.

Degree Requirements

Upon acceptance to the IMPRS, students and their PI must decide which academic degree the student will pursue. The student is not limited to only pursuing the degree offered at their laboratory location (i.e. a student working in a lab in Florida can pursue a degree from Uni Bonn and vice versa). Academic work completed at either campus can be transferred to meet the degree requirements of the degree-granting partner. The following is a summary of the requirements of the three degree granting programs. It is the responsibility of the student and mentoring PI to obtain, read and fulfill the formal requirements to obtain the degree (see links below).

FAU PhD Requirements

(http://biology.fau.edu/formsandpolicies/ib_phd_program_guidelines_2017.pdf)

- 1) Curriculum - for students entering with a BS/BA
 - a. Required Core Courses:
 - i. Integrative Biology (3 Credits)
 - ii. Course in Biostatistics (3 Credits)
 - iii. Scientific Communication (3 Credits)
 - b. Research Credits
 - c. Seminar/Journal club enrollment (1 Credit)
 - d. Electives (minimum of 3 courses, 3 credit each)
 - e. Students must pass a written and oral examination for admission to candidacy, as explained in the IBAN policies.
- 2) Curriculum - for students entering with a MS in related field
 - a. Students with a master's degree can have the above requirements waived on a case-by-case basis by demonstrating equivalent training from their master's program.
- 3) Dissertation
 - a. A written thesis must be submitted to the program director at least 1 month prior to the scheduled defense.
 - b. Thesis research results are to be presented in a public forum prior to the closed dissertation defense.

University of Bonn Requirements

- 1) Dr. rer. nat. from the Faculty of Mathematics & Natural Sciences (<https://www.mnf.uni-bonn.de/promotion/downloads/doctorate-regulation>)
 - a. Admission: Students that have completed a Master's degree or a Diploma, which comprised at least 8 semesters of course work, and culminated in a written research thesis are eligible. Other students holding Master's degrees which did not culminate in a research thesis, or who had fewer than 8 semesters of coursework may be required to complete additional qualifications for admission to candidacy. The

University will accept documentation of the Master's degree in German, English, and French.

- b. Curriculum: No specific curriculum requirements for the Dr. rer. nat. degree.
 - c. Dissertation: Students must defend their thesis research before a committee consisting of a (minimum) 4 persons. The committee must consist of 1) the supervisory PI, 2) a second PI from the faculty, 3) a professor or other professional researcher from a similar discipline (Fachnah) and 4) a professor or other professional researcher from an unrelated discipline (Fachfern). Other members may be included in the dissertation committee, as appropriate. A written thesis must be presented for evaluation by this committee. Once the committee approves of the written thesis, the graduate student must give a public seminar on their thesis research (limited to 30 minutes + Q&A), followed by a closed/private examination by the committee (limited to 90 minutes). NOTE: the Dissertation committee is not required to monitor the progress of thesis research, only to judge the quality of the completed thesis and knowledge of the candidate.
- 2) PhD from the Faculty of Medicine
(<https://www.medfak.uni-bonn.de/de/fakultaet/akademische-verfahren/promotion/phd-md-phd/promotionsordnung-phd-eng>)
- a. Admission: Students must have completed a Master's degree, or a medical degree for admission. There is no requirement of a written research thesis from the Master's program, and the student must only have attended 6 semesters of course work. The sponsoring PI must be from the Medical School Faculty.
 - b. Curriculum: Students must demonstrate regular participation in the IMPRS Brain and Behavior curriculum.
 - c. Dissertation: Same as for the Dr. rer. nat. but with faculty from the Faculty of Medicine.

Ethics and misconduct

The scientific pursuit relies on the intellectual honesty and integrity of individual researchers. We support and encourage an open research and training environment where all persons are entitled to participate in the respectful exchange and criticism of ideas. All students, post-docs, and faculty of the IMPRS graduate school are expected to adhere to the highest standards of academic and research integrity. Breaches of behavior that violate ethical standards in the field include, but are not limited to, misrepresenting research findings, misuse of research subjects, or plagiarism of others' work or ideas. Students should be aware of the standards of ethical behavior within the field of Neuroscience research and should bring any concerns about conflicts of interest to the attention of their PI, thesis committee members, or the Faculty of the graduate school, as appropriate. Potential ethical conflicts will be treated seriously, and students will not suffer adverse consequences to their progress for raising honest concerns.

Mentoring

In addition to the mentoring provided by the mentoring principal investigator and faculty members on the thesis committee, PhD students will be offered mentoring advisors upon admission. The IMPRS students will select by vote three PIs from the IMPRS faculty who are willing to act as mentors. These mentors may be contacted for advice on scientific and career issues.

Further, the faculty mentors chosen by the students will work closely with the IMPRS coordination office to offer support and assistance in directing students to the appropriate resources for resolving conflicts with the mentoring PI. IMPRS students are admitted to the graduate school with the caveat that there is a successful match with an IMPRS mentoring PI. Should the relationship between student and PI become irreconcilable, the student has the opportunity to find another IMPRS PI and change labs.

Leadership Opportunities

Elected student representatives will represent the IMPRS students by briefing the Steering Committee, the Selection Committee, and the Teaching Committee to convey student opinions, suggestions and concerns. Students can also be involved in the logistical and organizational aspects of the Bonn Brain³ and Sunposium™. The student council of BIGS Neuroscience Graduate School represents the interests of all PhD neuroscience students at the University of Bonn. IMPRS students will be eligible to stand for election to the BIGS students' council. The Graduate and Professional Student Association represents graduate students at FAU and provides opportunities for access to academic support resources, social programming, professional and leadership development, conference travel funding, and networking opportunities.

Resources and Recommendations for PhD Students

International relocation support

For students that need to relocate to join their research group in either Germany or Florida, resources to help with finding housing, acquire the needed work permits, and other questions can be found by contacting:

Jupiter, FL (USA): Paul Evans
Bonn, Germany: Ezgi Bulca

In addition, the Department of International Affairs of the University of Bonn provides support and advice to international students and researchers (<https://www.uni-bonn.de/institutions/international-office>). In particular, the Pro-Motion Welcome service for international Ph.D. students offers support to students in the first days after their arrival in Bonn (<https://www.uni-bonn.de/studying/international-students/phd/social-support>). The Office of International Student and Scholar Services at FAU provides similar services to international students starting on the Jupiter campus (<https://www.fau.edu/international/>).

Resources for students from non-Neuroscience backgrounds

The IMPRS for Brain and Behavior welcomes students and researchers from diverse backgrounds. However students from these backgrounds may lack some background knowledge of biology and the brain. The following courses are recommended for these students:

FAU:
<http://www.fau.edu/academic/registrar/FAUcatalog/science.php>

Uni Bonn:
<https://big-neuroscience.de/curriculum/>

PhD Timeline Overview													
Year	Milestones	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Doctoral supervision and Principal Investigator (PI) are assigned at outset of PhD	█											
	Designate a Thesis Advisory Committee (TAC)	█	█										
	Present the topic of the doctoral work at the 1st meeting of the TAC (20-30 min.)		█	█	█								
	Submit written Proposal of Doctoral Work (8-10 pages)				█								
	Present a poster at either BonnBrain ³ (Germany) or Sunposium (USA) meetings									█			
	Present a progress report on the 1st year's progress in PhD Seminar (15 min.)											█	█
	Submit 1st written progress report (1-2 pages)												█
	Attend the short-course (alternating Germany & USA)			█									
	Regular participation in a journal club and attendance at Institute Seminars	█	█	█	█	█	█	█	█	█	█	█	█
Year	Milestones	13	14	15	16	17	18	19	20	21	22	23	24
2	Meet with TAC and present current progress and planned future direction	█	█	█									
	Present a poster at either BonnBrain ³ (Germany) or Sunposium (USA) meetings									█			
	Present a progress report on the 2nd year's progress in PhD Seminar (15 min.)											█	█
	Submit 2nd written progress report (1-2 pages)												█
	Attend 1 advanced training workshop on the home campus	Can be completed any time throughout the year											
	Complete 1 "Soft Skills" workshop on the home campus (Scientific writing, Scientific Presentation, Professional Ethics, etc.)	Can be completed any time throughout the year											
	Regular participation in a journal club and attendance at Institute Seminars	█	█	█	█	█	█	█	█	█	█	█	█
Year	Milestones	25	26	27	28	29	30	31	32	33	34	35	36
3	Meet with TAC and present current progress and planned future direction; set proposed defense date	█	█	█									
	Prepare & submit the written thesis										█	█	
	Present the oral thesis defense												█
	Present a talk at either BonnBrain ³ (Germany) or Sunposium (USA) meetings									█			
	Present a final progress report on the 3rd year's progress in PhD Seminar (25 min.)									█	█	█	
	Submit 3rd written progress report (1-2 pages)											█	
	Attend 1 advanced training workshop on the home campus	Can be completed any time before thesis is submitted											
	Complete 1 "Soft Skills" workshop on the home campus (Scientific writing, Scientific Presentation, Professional Ethics, etc.)	Can be completed any time before thesis is submitted											
	Regular participation in a journal club and attendance at Institute Seminars	█	█	█	█	█	█	█	█	█	█	█	█