

**Matters
of Activity** Image
Space
Material

Structured
PhD Program
»Matters of Activity«

Program Regulations - 02/2020

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1. Preamble

In the PhD program »Matters of Activity«, PhD Students from the natural and engineering sciences, humanities and design are jointly researching the foundations for a new culture of materials and a re-establishment of the analog in the digital age.

In an outstanding professional environment, they examine images, spaces and materials as active building forms in which nature and culture intertwine in a new way on both a physical and symbolic level. The PhD projects create an extended understanding of the adaptivity and interactivity of materials, and develop innovative design strategies and visualization forms for structures that adapt to specific requirements and environments against the background of a new role of design. Together, a change of view from passive matter to analog-coded *active matter* will be carried out and re-evaluated compared to digital description methods.

The program is aimed at PhD Candidates employed within the Cluster's research projects, but in individual cases is also open to PhD Candidates with their own funding who are doing their PhD on closely related topics (4.2 General Selection Criteria). The committee of the PhD program decides on admission.

As a rule, the PhD Candidates complete a 36-month structured training program in a cohort of approximately ten people. The small group size allows an intensive exchange for the research and development of sustainable strategies and technologies, and creates an ideal basis for jointly researching active materiality with a high scientific standard and is at the same time application-oriented. The close cooperation between the disciplines within the Cluster enables PhD Candidates to combine experimental and creative approaches with historical analysis in order to draw practical and theoretical conclusions.

With a clear focus on the promotion of qualification work, whose formalities are defined in the PhD regulations of the respective faculty/university, the program aims to productively combine the PhD projects with the joint research in an interdisciplinary working group and to make them compatible. The program ensures PhD projects enjoy structured supervision, and PhD Candidates receive adequate consultation in all questions of career planning. Regular progress presentations accompany the research work and promote its successful completion within the planned timeframe. The program is member of the Humboldt Graduate School.

2. Objectives

The PhD program »Matters of Activity« makes it possible to complete distinguished PhDs within a period of 36 months and, in addition to disciplinary qualifications, establishes close cooperation between the natural and engineering sciences, humanities and design.

The program creates a framework in which the methods and contents of one's own PhD project can be critically discussed in the context of similar topics and makes it possible for qualification work to be connected to higher-level research contexts. With the dialogue between disciplinarity and interdisciplinarity, the program enables an expansion of discipline-specific knowledge and thus contributes to innovative research topics within the disciplines as well.

The PhD Candidates are supported by an obligatory supervisory structure that guarantees the plannable, transparent and committed supervision of extraordinary PhD projects. In order to facilitate career transitions, the program offers a wide range of key competencies. In addition to networking with their own peer group, the program supports PhD Candidates in establishing and consolidating strategic interdisciplinary contacts within the scientific community – qualified scientists working on closely related topics – that are relevant to their own projects, and in using them profitably to increase the visibility of their own work.

3. Structure

3.1 Structure of the Curriculum

Module 1: Research Project	150 CP Workload 3,750 h
Module 2: Progress Presentations	3 CP Workload 75 h
Module 3: Research	12 CP Workload 300 h
Module 4: Practice	12 CP Workload 300 h
Module 5: Key Competencies	3 CP Workload 75 h
In total:	180 CP Workload 4,500 h

The program's objectives are implemented within the framework of the qualification program, which consists of five modules within which a total of 180 *Credit Points* (CP) are earned during the PhD phase. One *Credit Point* is equal to 30 hours of time, and preparation and revision of the format also need to be estimated.

To take into account the diversity of the research topics and disciplinary backgrounds of its members, no uniform curriculum is planned. Instead, part of the program content is structured according to the objectives of competence acquisition: The modules set qualification objectives, and most of the services and activities to be provided for them are determined and coordinated for the participants individually, and in consultation with the supervision team. In this way, the PhD program takes into account the heterogeneity and diversity of disciplines of the PhD projects at the Cluster, and avoids mandatory events that are not conducive to the respective PhD project in favor of a free structuring of the priorities ([6.4 Event Formats](#)).

[3.2 Committee of the PhD Program](#)

The PhD program committee consists of the four Cluster Directors who represent the natural sciences, the humanities and the design disciplines, one representative from the ranks of the PhD Candidates as well as the Coordinator of the program as an advisory, non-voting member. If required, the committee can be individually expanded and adapted to the respective PhD project.

The committee academically supervises the PhD program and assures its quality. Every year, the committee and invited guests participate in the progress presentations of the PhD Candidates and meet afterward to discuss the developments in the program, to make recommendations for action and, if necessary, to modify the curriculum. The committee of the PhD Program decides on applications exceeding 1,000 Euros by a simple majority. The number of members with voting rights can be adjusted individually as required.

[3.3 Coordination Office](#)

The Coordinator of the program acts at the interface between the PhD Candidates and supervisors and, in coordination with the program committee, is responsible for the conception, further development and implementation of the professional and interdisciplinary qualification program as well as the progress reviews. They advise and support PhD Candidates individually on the topics of study and career planning, supervision, stays abroad, application procedures, conflict management, etc.

The Coordinator is responsible for the monitoring, evaluation and quality assurance of the program - e.g. compliance with the Supervision Agreement - and represents this externally to partner organizations and funding institutions.

[3.4 Humboldt Graduate School](#)

The program is a member of the Humboldt Graduate School. The Humboldt Graduate School functions as a quality assurance and evaluation body and provides interdisciplinary services and non-technical soft skill training as well as mentoring and conflict management.

4. Membership

4.1 Application and Selection Procedure

Admission to the program usually takes place in cohorts of approx. ten PhD Candidates and is mostly tied to one PhD position in the Cluster. In exceptional cases, PhD Candidates may also be admitted to the program individually. PhD positions are advertised on a project-by-project basis and may therefore vary in their admission criteria and requirements. The PhD Candidates are selected in a two-stage and competitive selection process by the responsible project's PI's. The written application is followed by personal interviews. Job advertisements in the Cluster are generally international. It is also possible to admit associated PhD C Candidates who are funded by third parties if they meet the general selection criteria listed below. The committee of the PhD program decides on admission by a simple majority.

4.2 General Selection Criteria

- Scientific suitability of the applicant
- Scientific quality of the PhD project, relevance to Cluster research
- Interdisciplinary connectivity of the PhD project
- Feasibility completing the PhD project within the program duration of 36 months
- First supervisor of the PhD project is a PI or AI in the Cluster

4.3 Admission

Selected applicants will be informed of their acceptance to the program in writing, and provisional admission takes place with the start of employment. Final admission to the program takes place as soon as the PhD Candidate and the supervisor sign a binding Supervision Agreement in which both sides accept the rules of good scientific practice and the faculty grants its official acceptance into the PhD program. Admission to the doctorate and the signing of the Supervision Agreement must take place within six months of the start of the contract.

4.4 End of Membership and Certification

As a rule, membership in the program is tied to a valid employment contract with the Cluster or one of its cooperation partners, and ends after 36 months. In exceptional cases, membership in the program may continue even after 36 months, in which case it is no longer possible to apply for a postdoctoral scholarship. Upon successful completion of the program, PhD Candidates receive an ungraded certificate of participation and a *Transcript of Records*.

4.5 Expulsion from the Program

Admission to the PhD program may be withdrawn or revoked at any time for good cause. An important reason could mean a PhD Candidate a) has repeatedly or to a considerable extent failed to fulfil the duties incumbent upon them, in particular despite repeated requests to do so, having violated their reporting duties, b) has violated the Code of Good Scientific Practice, or c) has unjustly obtained their acceptance as a PhD Candidate by falsifying their admission requirements.

5. Supervision of the PhD Projects

5.1 Diversity of Supervision

Supervision is carried out by a supervision team with at least two supervisors having different disciplinary expertise. The goal is to provide innovative PhD projects with disciplinary expertise as well as a variety of methods and perspectives from other disciplines from the outset in order to ensure that they can be linked to the goals of the Cluster. External persons such as, for example, from industry and business or international scientists, can also be integrated into the supervision team. The prerequisite is at least AM status (Associated Member) the Cluster. The participation of the supervision team in the PhD process is governed by the respective PhD regulations according to which the Candidate is awarded a PhD. In any case, binding agreements between the supervisors regarding the supervision concept and a transparent distribution of responsibilities are helpful.

5.2 Initial Supervision Interview und Supervision Agreement

The PhD Candidates are advised by their supervisors on a regular basis. At the beginning of the PhD phase, the content and form of supervision are regulated by a binding supervision agreement ([Annex 1, Supervision Agreement](#)). The supervision agreement sets out the expectations and responsibilities of both sides, makes the relationship between PhD Candidates and supervisors transparent in terms of content and time, and defines the modes of exchange. The program makes a template available for this based on the recommendations of the German Research Foundation (DFG). In its function as an individual arrangement, the Supervision Agreement can be adapted during the course of the PhD.

The Supervision Agreement is signed during an *initial supervision interview* between the PhD Candidate and the first supervisor and, if possible, the second supervisor – the basis for this is a first proposal of the PhD project. The first supervision interview serves to concretize the research design, i.e. the subject and objective of the PhD. Particular attention should be paid to ensuring that the work plan and timetable are realistic in their sub-areas and structured by clearly defined milestones. In the following, this facilitates the continuous monitoring of

work progress. The *initial supervision interview* must take place within the first six months of the start of the contract. Its written documentation and a copy of the supervision agreement must be submitted to the program Coordinator within the same period.

5.3 Career Support

In addition to providing scientific advice, supervisors support PhD Candidates in their individual career planning, which can encompass both the academic field and their career outside the university. At the latest by the end of the second year of PhD studies, a *perspective discussion* takes place during which the supervisors advise their PhD Candidates on what qualifications are appropriate for their professional development. The program Coordinator receives documentation of the interview. As a supplementary offer, PhD Candidates can also make use of the career counselling offered by Humboldt Graduate School or external counselling and coaching services.

6. Qualification Program

6.1 Freedom to Determine the Research Focus

In order to enable PhD Candidates to specify their curriculum individually, most of the courses in Modules 3 and 4 are not specified in terms of content. This way, the PhD program takes into account the heterogeneity and diversity of the disciplines of the PhD projects in the Cluster, and avoids mandatory courses that are not useful for the respective PhD project in favor of a free structuring of priorities.

6.2 Documentation of Credit Points

The documentation of the work output and the acquisition of *Credit Points* in Modules 1-5 is carried out independently by the PhD Candidates in a tabular overview provided by the program. The overview is submitted annually (together with the written progress report) to the Coordinator who reviews it. In addition, the Coordinator is also the contact person for questions concerning the awarding of *Credit Points* and their documentation.

6.3 Module Descriptions

Module 1: Research Project (150 CP)

Module 1 comprises the independent research work of the PhD Candidates, including the recording of the state of the research, reading, laboratory work, data collection, evaluation, material research, prototyping, model building and writing, and dissertation defense.

Module 2: Progress Review (3 CP)

Module 2 comprises three different progress presentation formats per PhD year:

- *Supervision Interviews*: The PhD Candidates discuss the progress of their PhD project with their supervisors as specified in the Supervision Agreement (usually quarterly). The supervision interviews are recorded and signed in order to increase the commitment.
 - *Progress Report*: At the end of each year, PhD Candidates submit a 1-2-page progress report on the status of their PhD project to the program Coordinator. The progress report includes the current time schedule as well as the documentation of the *Credit Points*.
 - *Poster Presentation/Science Slam*: In addition, in the presence of the PhD committee and selected guests, a joint progress presentation of all PhD Candidates is held annually. After the presentations in the plenum, individual PhD Candidate discussions with the program committee follow. The composition of the committee can be individually adapted to the PhD projects as required.
- The formats of the poster presentation/Science Slam vary according to the training year:
- o 1st year: Presentation of a scientific poster
 - o 2nd year: Short lecture as part of an internal Cluster Science Slam
 - o 3rd year: Update and presentation of the scientific poster

Module 3: Research (12 CP)

The activities in Module 3 serve to provide PhD Candidates with specialist and methodological qualifications and to strengthen their interdisciplinary skills through the targeted acquisition of knowledge. In addition to formats that are carried out at the Cluster, events at other universities and non-university institutions can also earn credit if they support the PhD project thematically and methodically and are approved by the respective supervisors.

Module 4: Practice (12 CP)

The activities in Module 4 require active commitment on the part of the PhD Candidates. Through the independent organization of seminars, workshops or publications, for example, key qualifications for a future career can be acquired in addition to the content skills. Practical stays and internships at non-university institutions are also supported and can be credited in the module.

Module 5: Key Competences (3 CP)

Within the framework of Module 5, at least three of the following key competence courses at the Humboldt Graduate School or comparable offerings must be taken. The Coordinator of the program can provide advice on course selection.

- Good scientific practice
- Career planning
- Communication & presentation
- Good teaching
- Project work and management
- Self-organization
- Writing (scientific) texts
- Scientific writing/publishing
- Disputation training

Event Formats

The following list provides a good overview of which activity formats can be credited in Module 3 and 4, and to what extent. The qualification offer can be extended and adapted at any time during the program period after consultation with the program committee. This particularly takes into account the fact that the interdisciplinary group of PhD Candidates should be given the freedom to develop ideas and formats themselves, as well as implement them themselves.

Brown Bag Brunch | regular participation per semester 1 CP

The Brown Bag Brunch is a 1.5-hour weekly internal meeting that serves the presentation of research in the Cluster projects as well as the discussion of central questions of the Cluster. The meetings are prepared by members of the Cluster, in particular the Research Associates and PhD Candidates. The informal character of the Brown Bag Brunch should foster the breaking down of hierarchical boundaries and communication barriers.

Cluster Day | regular participation per semester 1 CP

Cluster Day is an internal event for all members that takes place regularly once a month. Cluster Day offers projects the continuous opportunity for intensive exchange between PIs and scientific staff. As a rule, internal project meetings are supplemented by formats in the plenum in which contents concerning the entire Cluster can be presented and discussed.

Scientific Poster Presentation | 1 CP

The goal of the poster presentation is to present the progress of the PhD project clearly and concisely and to discuss it critically within the PhD program. The poster can also be used to focus on a selected aspect, a chapter or a problem that is currently being worked on, but the scope of the work should remain clear. The workshop »Theory + practice of the design of scientific posters« and further training on design programs such as Adobe Indesign can be taken as preparatory courses.

Science Slam | 1 CP

As part of the Science Slam, the PhD Candidates briefly present their research topic in the most exciting, vivid and entertaining lectures possible in no more than 10 minutes. A wide variety of aids are permitted. Even though the focus is on research in this format, the scientific value of the lecture plays a subordinate role. The goal is to present the topic in an entertaining way and to address an audience that is not familiar with the subject.

Seminars, Lectures, Colloquia, Reading Groups | regular participation per semester 1 CP

In addition to participating in Cluster events, PhD Candidates can also benefit from Berlin's diverse educational landscape, strengthen their disciplinary and interdisciplinary profile, and, in terms of topics close to the PhD project, receive credit for their seminars, lectures, colloquia, reading groups, etc. outside of the Cluster.

Teaching | per semester 4 CP

Teaching experience is a key qualification for an academic career. The coordination of the PhD program supports PhD Candidates in organizing a teaching assignment or a teaching assistant. In addition, further education can be taken for good teaching.

Conferences and Workshops | active participation or organization 2-5 CP

PhD Candidates are expected to actively participate in the current discourses of their discipline or optionally, to network across disciplines. This participation/networking can take place either through lectures, poster presentations at conferences, or by organizing their own format.

Publications | 1-4 CP

Publication of, for example, an article in a scientific journal or an article in an anthology. As a low-threshold offer, PhD Candidates have the opportunity to publish articles within the protected framework of the Cluster newspaper and thus share content with the Cluster community. The Cluster journal is a journal for members of the Cluster and a central internal communication organ. It reports on current events and Cluster research on a monthly basis. The editorial coordination of the Cluster also advises on publication strategies in the PhD phase.

Retreat | participation 1 CP

As a kick-off event for all PhD Candidates of a new cohort, the program will organize a two-day retreat near Berlin. The retreat serves as an opportunity to get to know each other and to exchange ideas, as well as to work together on the research designs of the PhD projects. In addition to various workshops, institutional and scientific requirements for the PhD thesis are discussed (good scientific practice) and strategies of project and time management are explicitly applied.

»Learning with...« | offering 0.5 CP

The format »Learning with...« is an internal Cluster event series offered by the scientific staff for all members of the Cluster. In this way, various expertise is made visible and productive for further internal training. An event lasts approximately one and a half hours. The diversity of the Cluster is reflected in the content of the events, which thus makes an important contribution to interdisciplinary networking. In terms of content, this format can offer everything that also plays a role in the Cluster projects. This ranges from learning the most diverse computer programs, to machine instruction for workshop operation, to theoretical content from the disciplines represented. Within the Cluster, this is an opportunity for PhD Candidates and research associates to also gain their first teaching experience.

Key Competences | 1 CP

Within the framework of the PhD program, PhD Candidates can choose from a large number of high quality offerings in key competences relevant to PhD studies. In addition to the offerings of Humboldt Graduate School, there are a number of positions at Humboldt-Universität and others universities that also offer courses. PhD Candidates can choose the content that is suitable for them from the existing range, but they can also organize the program themselves.

Participation Summer University | 2-4 CP

Universities worldwide offer international summer and winter universities during the summer and winter months. These 2-6-week, often interdisciplinary programs offer the opportunity to gain international experience as an alternative to a semester or year abroad. They can also serve as preparation for a longer stay abroad.

Free Format | CP after consultation

In consultation with the Coordinator, further scientific activities outside the Cluster (organizing workshops, a series of lectures, conferences, reading groups, etc.) that support PhD Candidates in their research work may also be credited.

Module		Year			CP total
		1.	2.	3.	
1	Research Project	50	50	50	150
2	Progress Presentation	1	1	1	3
Supervision Interviews // Annual Reports // Poster Presentation		1	1	1	3
3	Research				12
BBB regular participation per semester 1 CP		1	1	-	2
Cluster Day regular participation per semester 1 CP		1	1	-	2
Retreat participation 1 CP		1	-	-	1
Seminars & Lectures participation per semester 1 CP		-	-	1	1
Summer University participation 2-4 CP		-	4	-	4
Free Format CP after consultation with the committee		-	2	-	2
4	Practice				12
Teaching 1 Semester 4 CP		4	1	-	5
Publication 1 Article 1-4 CP		-	-	2	2
Workshop/Conference Organization 2-5 CP		-	3	-	3
»Learning with...« offering 1 CP		0.5	-	0.5	1
Free Format: CP after consultation with the committee		1	-	-	1
5	Key Competencies				3
Good Scientific Practice		1	-	-	1
Project Management		-	1	-	1
Disputation Training		-	-	1	1
CP total per Year		60	65	55	180
CP without Research Project		11	14	5	30
Workload with Research Project in hours		275	350	125	750

7. Postdoctoral Scholarship

Members may apply for a postdoctoral scholarship for a maximum period of 9 months, provided that they submit their doctorate in due time and achieve all required *Credit Points* in modules 2-5 within the 36-month program period. Selection criteria and admission are laid down in the scholarship guidelines of the Cluster and the scholarship statutes of Humboldt-Universität zu Berlin.

8. Partnerships and Networks / Internationalization

The Cluster's project structure offers low-threshold access, scientific exchange and mutual support to PhD students in the program with a large number of qualified researchers working on closely related topics. The Cluster maintains a large number of partnerships and works together with numerous local and international institutions whose scientists are permanently or temporarily involved in research. All guests working in the Cluster can be explicitly integrated into the PhD program and are also available for the research agenda and qualification program. Contact with outside experts from other universities or research institutes, museums, etc. gives PhD Candidates the opportunity to enter into sustainable relationships within the Cluster and beyond – and at the very least give them sustainable perspectives for their careers after completing their doctorate.

The program expressly promotes international exchange and international mobility for its PhD Candidates. If possible, during the PhD phase, students should spend time abroad and attend international conferences. The program offers financial support and comprehensive advice. This facilitates the continuous expansion of existing international partnerships and the establishment of new ones.

9. Diversity, Equal Opportunities, Family Friendliness

The PhD program is not only aimed at excellence but also at equal opportunities and diversity. The supervision concept – each doctorate is supervised by a team of at least two supervisors with different disciplinary expertise – anchors diversity as a variety of perspectives in the PhD program. Interaction and research in an interdisciplinary working group is understood as a process that is designed jointly by all participants. In this way, the structured training program offers open spaces in which interdisciplinary and intercultural dialogues can be conducted.

The appreciation of different prior experiences and needs with regard to the PhD project and subsequent career planning is promoted and accompanied by target group-specific and comprehensive measures within the framework of the qualification program. The Humboldt Graduate School offers PhD Candidates a wide range of training courses and advice. According to the motto »strengthening strengths,« the potential of female PhD Candidates in the natural sciences is particularly being strengthened and promoted at the Humboldt-Universität zu Berlin. WiNS (Women in Natural Sciences) Adlershof, under the umbrella of FINCA (Promotion of Women in Science and Business in Adlershof), actively promotes and encourages women to pursue an academic career by acquiring key qualifications and building networks.

In order to promote equal opportunities for all sexes in research and to create family-friendly working conditions for scientists, the Cluster and the PhD program have introduced flexibility in terms of regulations on working hours, work locations, childcare outside regular childcare hours and family-friendly premises (e.g. playrooms, family rooms). The freedom to set priorities also means that the program is highly family-friendly.

The central women's representative of the Humboldt-Universität zu Berlin offers individual counselling in cases of discrimination and disadvantage as well as in all questions of career development. The Family Office of the Humboldt-Universität zu Berlin provides information on all questions related to the care and nursing of relatives and advises on the subject of compatibility. The program Coordinator also offers advice on the compatibility of doctorate and family.

10. Conflict Management

The Coordinator of the program is available to advise PhD Candidates on all questions related to their doctorate. In the event of conflict, it is possible to consult the arbitration board of the Cluster with the PhD student representative. The Humboldt Graduate School's conflict consulting hour also offers a professional and independent opportunity for conflict mediation by trained coaches and consultants. The diverse range of soft skill courses also offers PhD Candidates support in many areas.

11. *Quality Assurance*

The PhD program »Matters of Activity« is based on the quality standards of its umbrella organization Humboldt Graduate School, which regularly checks compliance with these standards through various initiatives. In addition, ongoing self-evaluation is an integral part of the program's concept. If the PhD committee's assessment and/or coordination reveal any potential for optimization in the structured training of PhD Candidates, conceptual changes can also be made during the course of the program. Adjustments and initiatives are documented annually in an internal self-report.