

## INFORMATION ON THE DOCTORAL AGREEMENT

### REQUIREMENTS FOR COMPLETING A PHD

The Doctoral Agreement provides the framework of requirements and conditions necessary to be granted a PhD within the RTG (duration of doctorate, research objectives, strengthening of complementary skills) as well as expected research accomplishments (number of research publications and attendance to research conferences).

***Duration of the doctoral work:*** you are expected to complete your PhD thesis in 3 years.

***Research objectives:*** These are individual for each research project and, together with milestones, should be discussed and agreed upon with the PI and co-PI. The specific research accomplishments shall be reported, discussed and, if needed, readjusted annually together with the supervisors (see *Assessment of Progress*). One week before the meetings, you will prepare a progress report, detailing your research accomplishment and other relevant activities during the last year. The purpose of these meetings is two-fold: first, both advisors will give feedback on the scientific goals of the thesis and how to reach them within the remaining time. Second, at these yearly meetings you will have the chance to work through an individual development plan (research and career goals) with both advisors. The goal of this process is to help you identify their strengths and areas where there is room for improvement, which will lead to recommendations for specific training, both scientific and complementary. Also, any problems that might arise during the course of the doctorate shall be discussed at these occasions. To help structure these meetings, there will be a checklist that has to be signed by the PhD candidate and both advisors. The research produced during the doctoral program will result in the completion PhD thesis within 3 years of employment. In addition, the you will also present research accomplishments at scientific workshops or conferences.

***Educational objectives:*** In addition to lectures that will broaden your knowledge, you will also have the chance to improve on your teaching and professional competencies. For the latter we will offer courses to strengthen complementary skills, such as on scientific writing, conference presentation, time management, intercultural awareness, communication in international and interdisciplinary teams, the art of self-presentation, etc.

### ASSESSMENT OF PROGRESS

You can choose from a series of activities and lectures during the time of your PhD work, which will help keep track of your progress. Individual participation is recorded through a system of credit points (CP), with a total number of 24 CP required to finish your PhD. You will be handed a sheet at the starter seminar on which you are responsible for keeping track of all courses, seminars, and meetings you have attended. Moreover, you are encouraged to engage in the organization of at least one activity (research seminar, workshop, tutorial, or retreat), for which you will be awarded at least 1 CP. The credit points can be earned in three different categories:

A. Compulsory activities	12 CP
B. Scientific training	6–12 CP
C. Complementary training	0–6 CP
Total	24 CP

### A. Compulsory activities

**Starter Seminar (1 CP):** The one-day starter seminar will provide an overview of the research and aim of the RTG, the offered possibilities and, not the least, a means for you to get together and meet the other candidates at this early stage. It will also include an initial training on the rules of good scientific practice as well as an introduction to the handling of research data and other data management skills like how to maintain a lab notebook.

**Lecture Series (1 CP):** In these lectures you will have the chance to meet participating PIs, who will introduce themselves and give a lecture on their field of expertise.

**Introductory Lecture (6 CP):** During the first year, we will offer an “Introduction to Soft Matter”. Among other topics, this lecture will include units on scattering methods, diffusion processes, liquid-state theory, and molecular interactions.

**Progress reports (2 yearly, 1 CP each):** are considered as part of the compulsory activities and should be submitted at the end of the first and second year, with copies to PI, co-PI, and the coordinator. The report will be followed-up by a meeting with supervisors (PI and co-PI) to discuss the progress made in that year.

**Exchange Project (1 CP):** In order to get closer to the complementary aspect (theoretical/experimental) of your thesis and thus boost collaborative work, you will engage in an exchange project. Through the combination of theoretical and experimental work, we expect you can develop early on a broader understanding of and the skills to advance complex projects in a team by bringing together different perspectives (modeling approaches, technical aspects of the experimental setup, etc.) into a single project. To this end, you will propose and carry out a small collaborative project in the group of your co-supervisor (and, if applicable, together with your tandem partner). You can decide when to spend this time (about 4-6 weeks) in the other group and are required to document your efforts in your thesis.

**Research Seminar (1 CP):** There will be a research seminar during each semester, on a biweekly schedule. Talks will present recent advances in the field of self-assembly of soft matter. In the second and third year, speakers will alternate between external speakers (either visiting researchers or speakers invited for this purpose) and the PhD candidates of the RTG, whereby each of you should present her or his research once. The seminar will be run by a group of candidates for one semester (i.e., six to seven talks). Before the semester, you will get together with the PIs and make suggestions for external speakers, with the final decision reviewed by the board.

### B. Scientific Training

**Tutorials** are an opportunity for you to teach other PhD candidates and thus gain teaching experience. These tutorials will be organized if there are enough candidates expressing interest in a subject. The format should be flexible (duration one day). The lecturer will receive 3 CP and will write up the lecture notes (4-5 pages), whereas the participating candidates will receive 1 CP for this activity.

**Advanced courses** (2-6 CP) consist on in-depth lectures on topics that are relevant to the RTG or that complement the expertise of the PIs. These lectures are compact and focused, and will contain a hands-on part. Possible topics for lectures include: Advanced Statistical Physics, Supramolecular Functional Systems, Polymer Physics, Physics of Soft Matter, Physics of Simple and Complex Liquids, Computer Simulations in Soft Matter. As an alternative, you can attend an external summer school, for which you will receive 2-3 CP.

**Conferences/workshops/ retreats:** An essential aspect of science is the communication of findings and results to the community, either specific to the field of study or to a wider audience. As a PhD candidate, you are thus expected to present your work in science meetings in the form of conferences, workshops, and retreats. Upon proof of a poster or a talk presentation at a meeting, you will get 1 CP for scientific training and 1 CP for complementary training.

In the spring/summer of 2022, we will organize a 4-day international **workshop**. The goal is that the workshop be largely organized by the candidates, receiving input and feedback from the PIs. To this end, about a year in advance 5-6 PhD candidates will be elected and form the organizing committee. They will i) collect suggestions for topics and speakers, reviewed by the board, ii) send invitations, iii) select outstanding candidates to present their research projects, iv) lead the local organization with support of the RTG coordination office.

You will also organize a **one-day symposium** right before the workshop, where only external PhD students will present their work (and then participate in the workshop). The goal is to help you establish contacts and a network of international peers. It is also a good opportunity to gain insight into the research in other leading groups in the field from students.

During the second and third year, there will be a two-day **retreat** in which all candidates are required to participate. The program will cover all project areas leaving ample space for discussion and some presentations by external speakers. PIs will not participate in the retreat. The location and program are determined by the candidates and will be approved by the board, with help of the coordinator for the logistics.

### **C. Complementary Training**

Each finished complementary training course will be awarded 1-2 CP depending on duration (typically either a single or two consecutive days). Examples include training on scientific writing, conference presentation, time management, intercultural awareness, and communication in international and interdisciplinary teams. These courses will be organized by the RTG coordination office.