

Guidelines Doctoral Plan

These guidelines are to help you to write your Doctoral Plan. It will be the basis for your Aptitude Colloquium, which you need to pass in order to advance to definitive admission as a doctoral student of D-USYS.

Summary/Abstract (approx. half page)

The abstract or summary should contain a brief introduction to the topic of your doctoral research, i.e., explaining why the topic is relevant and what the research gaps are that lead into your research hypotheses or questions. The hypotheses and questions should be explicitly mentioned, followed by the goals and how they will be addressed, i.e., what approach and methods will you use. Finally, please indicate the expected outcomes and their implications for your research field – and if possible, beyond your specific research field.

State of research

In this section you give a brief background to the context of your project. Think about questions like, “why is my research important?”, “for whom is my research output relevant”, etc. Then you should briefly explain what is already known in the field from previous studies (thereby correctly citing these studies), followed by what is still unknown, i.e., the research gaps. Then you can briefly explain, how you will address these gaps, e.g., by mentioning the approach and methods (do not go into details here, the details follow in the “Work Plan” section).

Research objectives / research questions

In this section you should indicate what questions you will address and how you will do this. Furthermore, the goal should be indicated clearly – what do you plan to achieve with your work, what are the expected outcomes?

Work plan (incl. methodology)

In this section you describe in more detail the research that you plan to carry out. The best way to do this is to have a clear organization, e.g., using work packages, in which you describe how the research will be carried out (e.g., laboratory study, field study, modelling, etc.) and how you will do it. Examples:

- Laboratory studies: what conditions will be tested? What is the experimental setup? What analyses will you perform? How many replicates are you planning to include?
- Field studies: Which field area will be selected and why? How will the field work be organized? What samples will be collected and how will they be measured, or what field measurements are planned?
- Modelling studies: Which model will be used? What conditions will be tested or implemented in the model? What data need to be collected (and how) before a model can be built? How is the model validated?

Other questions to consider are:

- Are there any risks associated with the planned work?
- If any of the tasks cannot be carried out, what is the backup plan?

Optional: Selection of preliminary results

If you already have some results from your doctoral work, you can indicate in the work plan what has already been completed (and briefly also what has been found), or you can also write this down in a separate section. Here you could also briefly indicate what would be your next step(s) based on your results. Also describe tasks that did not go as planned. Give a brief explanation of why and what you learned from the experience.

For further information check the following links:

ETH-level: [Ordinance on Doctoral Studies ETH Zurich](#) & [Rector's Implementation Provisions](#)

Department-level: [Detailed stipulations regarding the doctorate D-USYS](#)

Check with your supervisor to see if there are any regulations at institutional level.

Schedule and milestones

This section should include the time schedule for your entire doctoral project. Here you should indicate when the different tasks as outlined in the work plan are planned, as well as writing phases and other activities (taking courses, attending conferences, if already known). Indicate milestones, to mark the completion of specific plans and the achievement of (sub)goals. These milestones should be achievable, e.g., it is not a good idea to write that a paper will be published by then (as this is not entirely in your control), but you could write, for example, that a first draft of a chapter/manuscript has been completed. Other examples of milestones are:

- An experiment/fieldwork has been completed;
- A first model run has been performed;
- Results of a specific task have been analyzed and reported, etc.

References / literature (not included in page count)

Here you should provide a complete list of the references you refer to in the doctoral plan. Please indicate authors (if there are more than 10 authors, you can use "et al", e.g., Smith et al), year of publication, name of the journal/book, title, volume and page numbers, and [DOI \(digital object identifier\)](#). You can use a reference style that is common in your field of research, e.g., from a particular journal that is popular in your field of research.

Brief description of teaching tasks during the doctorate

Describe the teaching tasks you have been assigned to and indicate (approximately) how many hours per week you devote to such activities. Teaching tasks include, for example, assisting in lectures, practical classes, exercise classes and excursions, correcting students' reports, supervising students in semester projects, marking/supervising exams, etc.

Brief description of additional tasks

Describe any additional tasks you are assigned to (e.g., operating or maintaining equipment, maintaining the group's website, organizing summer schools, etc.). Indicate (approximately) how many hours per week you spend on these activities. If you and your supervisor have agreed that there are no additional tasks, also indicate this clearly in the doctoral plan.

In general, if you have any questions about the doctoral plan, please discuss them with your supervisor. They are familiar with the research field and can advise you on all aspects related to the state of research, style of references, etc.

The doctoral plan should be 10-15 pages, including the D-USYS title page but not the list with references.

ETH Zürich
Doctoral Administration D-USYS
CHN H47
Universitätstrasse 16
8092 Zürich

+41 44 632 25 23
phd@usys.ethz.ch
<https://usys.ethz.ch/en/doctorate.html>

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