Guidelines for making a PhD Study Plan - CMMW PhD Committee, November 2020

Available support documents and forms

The objective of this document is to make it easier for supervisors and PhD students to successfully submit study plans, i.e. avoid rejections of study plans by the CMMW PhD Committee. It **provides additional details to the formal DTU rules on preparing a PhD Study Plan**. The formal DTU rules can be found on DTU Inside, and we strongly suggest you review those as well before preparing or revising your study plan: https://www.dtu.dk/english/Education/PhD/Rules/PhDguide/Study_plan .

There are a number of additional online resources available for preparing your study plan:

- Study plans must be submitted through the **online portal PhDigital** (http://phdigital.dtu.dk/). Please do NOT submit study plans using the old paper form - that was phased out years ago. The paper form template is still available on DTU Inside for those PhD students that have started under the old reporting system.
- Please use the **appropriate forms for Special Courses and the Gantt-Chart**. They are linked from https://www.inside.dtu.dk/en/undervisning/regler/phd-uddannelse-studerende on the right-hand side.

Changes to the study plan and submission of final study plan

When submitting a revised Study Plan, you **must briefly, but comprehensively describe, as a comment or appendix, what changes you made**. If you attach an appendix, refer to the appendix in your comment. **Clearly state what was removed, what was added, what has changed for example in a "Before and After" table**. Especially when you change courses, please clearly state what courses were removed and what courses were added.

We ask that the final study plan is submitted no later than 6 months before the planned thesis hand-in, so typically 2.5 years after the start of the PhD studies.

Project description

The description should be one to three pages, written by the PhD student and approved by the supervisor. The description may be included in the form, or attached as an appendix. When attaching an appendix, clearly refer to the appendix in your comments on the form.

- Start with an introduction describing the project in a broader context.
  Give the background and motivation for the topic of the PhD project. The project background and motivation must be substantiated with relevant references to scientific state-of-the-art knowledge including peer-reviewed publications.
- Describe the objectives and deliverables of the PhD project.
  Please note that it is the PhD project that must be outlined. Explain how the PhD project and goals advance the state-of-the-art. Some PhD projects are part of a larger project with many

participants. The description of the larger project is relevant only as background information and can be attached as an appendix.
- Describe how you plan to reach the objectives.
  Please give details of the planned methods and procedures (experimental or other forms of empirical methods, numerical and/or mathematical). It is suggested that the research project is broken into smaller sub-projects so the solution of a sub-project can serve as a milestone in the time schedule.
- Include a list of references (at the end of the project description) to the relevant scientific state- of-the-art knowledge used in the background and motivation of the project.

External research stay

The PhD student should enter into active research environments outside DTU as part of the programme, either through stays at other institutions of research or private research companies etc. - primarily foreign ones. This also applies to industrial PhD students. By visiting another research environment, the PhD student can expand his/her network, participate in PhD courses, author articles and/or carry out research and thereby collect additional contributions to the research project. DTU recommends that an external research stay lasts for 3-6 months. Research stays down to one month can be approved and these may even consist of e.g. four visits of one week to the same organisation.

In order to ensure that the PhD students at DTU enter into active research environments outside the university, the following new rules apply to all PhD students enrolled as of 1 January 2018:

- The PhD committee will reject study plans that do not contain a plan for an external stay Information about a research stay must be entered in the half-year reports - either *planned, not planned or a dispensation*
- Fourth half-year report must contain information on *completed stay, planned stay* or *a dispensation*
- *A dispensation* may be granted in cases of personal or family related obstacles. The PhD school leader based on a recommendation from the main supervisor and the PhD student grants the dispensation.
- In the first version of a study plan, it is possible to include multiple alternative options. The committee does not expect that all arrangements for the external stay are finalized when the first study plan is submitted.

For PhD students enrolled **before 31 December 2017**, the following rule applies: due to special circumstances, some PhD students may not be able to complete an external research stay. In these cases,the PhD student must state in the half-year reports which alternative active local research environments he/she takes part in.

Read about planning the research stay, tax liability, work and residence permit when posted abroad on DTU Inside (access only for employees and PhD students at DTU).

For PhD students enrolled as joint or double degree students, the stay at the partner university counts as the required external research stay.

Course requirements

The course load should correspond to about 30 ECTS credits (1 ECTS credit corresponds to about 28 working hours and too many points will be sanctioned).

Minimum 15 ECTS credits should be at PhD level. If fewer points are at PhD level, justification should be given. No bachelor courses can be approved unless a justification is given. Special courses may not exceed 10 ECTS credits in total.

Up to 10 ECTS credits need not be specified. However, we recommend that plans for how to fulfil the course requirements be stated.

We ask you to consider the balance between courses that support soft-skills (such as presentation and communication courses), and courses that support the academic subject matter of your PhD (such as specific technical knowledge and research methods or specific academic publishing).

The most commonly used course databases for finding courses are https://kurser.dtu.dk/ (DTU Courses) and https://phdcourses.dk/ and https://phdcourses.nordicfivetech.org/ for external courses.

DTU courses

Remember to specify course numbers in the DTU course database

Special courses

- **Use the template** provided on the website of the PhD administration.
- Give a detailed description of the course content incl. bibliography.
- Look for inspiration in the course descriptions that already exist in the Course Database.
- Specify the name of the course organizer.
- Estimate the ECTS points based on workload (1 ECTS=28 hours) and justify this workload
- Indicate the time frame of the course, with start and end date.
- Provide details about the form of exam.
- Note that the topic of the special course cannot be too close to the topic of the PhD project i.e. a literature study which needs to be done anyway will not be accepted
- You cannot mix Scientific Dissemination activities with the earning of ECTS points i.e. you cannot earn ECTS points for writing a paper (unless it is one of the already existing courses like "How to write a Scientific paper").
- Special courses cannot exceed 10 ECTS points in total.

Look for inspiration in the course descriptions that already exist in the Course Database.

External courses

These are external courses, online courses and all DTU courses that are not in the DTU course database: Remember to include the course descriptions, which must be printed directly from the course provider's website. Indication of **level (master or PhD), workload and ECTS credits must be stated**. The committee will NOT use links to websites to track down information on external courses. All required information must be included directly in the study plan.

Scientific dissemination and department work

Please refer to the general guidelines on PhDigital. For dissemination work, writing of a paper typically accounts for 80-120 hours per paper.

The time schedule (Gantt-Chart)

The time schedule should be prepared thoroughly and must **use the Gantt-chart template** provided on the website of the PhD administration. It should include:

- Schedule of the major research activities (e.g. indicating when each Work Package from your research plan will be carried out)
- Literature study
- Courses
- Teaching and other forms of department work
- Dissemination activities, e.g. presentations at conferences and paper publication
- External research stay(s)
- Major research activities including the actual research work
- Expected major milestones
- Time for writing of papers and the thesis

It is important that the time schedule is realistic. It is important to allocate some time during the first year for the research project; also it is important that most time in the final year is allocated to the research project. The time schedule should be prepared in a Gantt chart format.

Most frequent reasons why Study Plans are rejected

- Revised and resubmitted study plans do not include a clear description of the changes
- The documentation for external courses is incomplete. The most frequent issue is that workload and / or ECTS credits are not explicitly stated and justified in the description.
- The description of 'Department Work' and 'Dissemination Work' is incomplete, very superficial and/or time estimates are not credible.
- The distinction between Department work and Dissemination should be clear, please read the instructions carefully. For example: project supervision is NOT dissemination. Also, a journal paper takes about 100 hours to write; teaching assistance is department work
- The study plan does not use the forms provided by the PhD administration for 'Special Courses' or the Gantt-Chart for 'Time Schedule' and/or the forms are not filled out completely.