

Comments on writing an individual curriculum (individual studyplan, individuell studieplan)

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1 Introduction

The individual studyplan serves a number of different purposes and its importance should not be underestimated.

A number of reasons why we do this:

- It's in the law so we must do it
- It lists the obligations of the PhD student
- It lists the obligations of the department
- It shows both the planning and the status of the student's PhD studies
- Updating it provides a natural opportunity to discuss the status of the PhD studies and helps to find possible conflicts/problems as early as possible.
- In case of a *real* conflict this is the legal basis to determine whether a PhD student can be fired: so be realistic in filling it in, but it is therefore also a very important document.

The first studyplan should be made in discussion with the director of study (at present Johan Bijmens, Thomas Bensby) and your supervisor. Updates and discussions together with your supervisor are also done during the meetings with the institute representatives (at present Dainis Dravins, Gösta Gustafson, Lennart Lindgren, Carsten Peterson). During the first session we will also put in all the people who need to have access to the studyplan.

The studyplan is a living document, it reflects the planning and the status and should therefore be quite different for a just beginning compared to an almost finished student.

1.1 Updating

The form to update it is available via <http://isp.science.lu.se/>

Things that need to be done with every update:

- The date and participants of your last meeting with supervisor and institute representative
- Activity: update the actual and planned activity as needed

- Add completed courses, note the registering in Ladok should be checked
- Evaluation and planning: the sub-projects are there to help you organize the work. These can be organized by paper, subparts of research projects, individual projects, . . . What has been accomplished should also be included.
- Planned courses
- Planned conference and summer school attendance
- Progress and planning towards the learning outcomes (goals, lärandemål) in the general PhD education rules. See Sect. 3 for more information.
- Note that this should be prepared by the PhD student and supervisor before the meeting with the institute representatives (save but do not lock the changes) where it will then be discussed and if appropriate changes made.

1.2 At the end of the updating: locking and signing

After everyone is in agreement wover the updated ISP it should be (in astronomy after the handledarkollegium/meeting of all supervisors) locked (which mkaes it an official version in the system). This should then be signed by all involved, the institute representative, the PhD student and the supervisors. The original should then be sent to the prefekt (head of department) for signing who will sent it on for archiving.

2 The protocol of the meeting with the institute representative

Should contain: what is discussed during the meeting and what has been said by whom (concisely). In case of disagreement, who has said what might be important to mention.

The individual studyplan should be revised and followed up. We have to show that we not only revise the study plans, which we do twice a year, but also that we follow up whether the previous study plans have been lived up to. The latter should be visible in the protocols from the meetings with the institute representatives. This will become important when the PhD education will be evaluated sometime in the not too distant future (in the next few years)

3 The general learning outcomes or goals

The learning outcomes listed below are those of the official rules (högskoleförordningen and högskolelagen). The quality of your education is in reaching those goals. This section lists a number of options how we try to obtain them. The text you write should reflect your own studies. The points as listed below are suggestions. This is included to make you aware of a number of other aspects of the PhD education other than simply doing research.

There is a large overlap between the different parts of the PhD education as well with many things serving several purposes. This can be reflected in the text you write. In particular the papers and the thesis show up in several of the learning outcomes.

Knowledge and understanding

demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialized knowledge in a limited area of this field

Broad:

courses, broader schools and conferences, seminars, colloquia and journal clubs, other weekly meetings in the research group

Specialized:

courses and schools directly related to your thesis subject. Some things you have learned while working on your specific projects/papers.

Both:

Note that writing the introduction to your licentiate/PhD thesis should show that you have mastered both.

demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular

General:

General courses plus attending conferences and summer schools, statistics, general programming. General thoughts on testing hypotheses and what it means to do science.

Specialized:

The thesis should reflect this but also specialized courses in particular tools/programs you have used. How are observations done. Running a Monte Carlo. The actual work done for your papers/thesis.

Both:

Preparing talks and posters (and presenting them) allows us to check your progress on this. Discussions with supervisor.

Competence and skills

demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues and situations autonomously and critically

Examples from the research projects here, where you need to read papers and figure out how to write the existing knowledge into your thesis/papers. Giving an overview talk of some subject in the journal club, informal seminar.

demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work

Planning of the research projects together with the supervisor. This learning goal is about how to do actual research and plan for it.

Time frame: the thesis and the projects should be ready in some reasonable frame, planned finishing of self-study courses.

demonstrate through a dissertation the ability to make a significant contribution to the formation of knowledge through his or her own research

This is the progress towards the thesis, possibly with progress on each paper.

demonstrate the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general

academic community:

Presentation of results at conferences at all levels, training for this is presenting stuff in local seminars and journal clubs and the like. There are also the Swedish particle and astronomy days where you meet your contemporaries. A very important part here is played by active participation in summer schools by meeting PhD students from other places.

Society in general:

for those who do it: take part in outreach activity, blogs, discussions with students

Others: the PhD seminars we have, learn to present what you do for non-specialists

Both:

teaching done in labs and exercise sessions and training from the educational courses.

demonstrate the ability to identify the need for further knowledge

Come up with new ideas for things to do while working on the research projects, identify what type of methods might be needed to solve your problem.

This should be clear from examples of papers you have read where you and/or the whole world might lack some knowledge.

demonstrate the capacity to contribute to social development and support the learning of others both through research and education and in some other qualified professional capacity

- Teaching takes on obvious role here, in particular those who have taken the pedagogical course
- assisting younger PhD students
- outreach activities
- Organizing journal clubs, informal seminars,...

Judgement and approach

demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics

- Checked to some extent by writing the thesis introduction and defending the thesis, those are clearly only the students' responsibility.
- Research ethics: general discussion when writing a papers and related parts. The short discussion present in the introduction course. For those who have taken an extra research ethics course, mention it.
- General reflection on what influences you and the results you want to obtain.

demonstrate specialized insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used

Discussion on ethics in the introductory course

Reflecting on the role of research and in particular yours in society.

Your own research should help you understand the limits of scientific results and help to see possibilities and limitations (give examples). How good are the models you use in your research.

Things that still need adding

1. The research schools and other cross-disciplinary activities: COMPUTE, INTEGRATE
2. Taking part in more general colloquia and seminars