PhD studies

Erik Fransén
Director of doctoral studies at CSC

Quality of PhD studies
KTH regulations
Support PhD student and supervisor
PhD environment

• FA: individual study plan, quality issues, any issues
• Doctoral programme (PA, programme committee): PhD courses, annual progress rep.
• Supervisor group: quality aspects of thesis
• PhD student – supervisor: detailed project disc.
Always use new form

### Individual study plan

<table>
<thead>
<tr>
<th>Admitted on date</th>
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<tbody>
<tr>
<td>Admitted to postgraduate studies; desired degree</td>
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<table>
<thead>
<tr>
<th>Intended degree of study effort during the next 12-month period</th>
<th>Achievements so far, percentage of total degree requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>See konteringsblanketten</td>
<td>Results, not time</td>
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</table>

Personalfunktionen (Kerstin Lagerstedt and Camilla Johansson) can calculate effective study time used

Achievements% >= Used effective time%
Courses to be given credit for
This applies to courses taken before present ad
Course code       Course name

Completed courses
Course code       Course name

Tillgodoräknande (accounted courses) if credits > 240 credits
Completed: note min 60% PhD level
Plan for supervising effort

min 1 meeting / 2 w, feed-back, follow up on plan

Results from previous study efforts
Magazine articles, contributions during conferences; other publications

Intended goal of education
Written assessment of how the required educational goals have been fulfilled in the subject area study programme into account.

Follow-up of study effort during previous year
Written evaluation; this should specify both research, postgraduate course and

See KTH regulations/regelverk

Use this to do your planning
2. Objectives as requirements

The objective of KTH’s third-cycle studies is that doctoral students must be first-rate, independent researchers. After completing the studies, persons with third cycle qualifications should have the ability to:

* describe and explain theories and empirical results within the area in question
* formulate specific research questions within the area in question
* use scientific methods and develop new knowledge through their own scientific studies
* produce critical analyses and evaluate methods applied and results from their own and others' scientific studies
* present and discuss research results in the scientific community
* present research in a pedagogical manner outside the scientific community and in an educational context
* assess ethical aspects of research within the area in question and act on that basis, and
* identify needs for new knowledge and have the knowledge to initiate and lead research

3. Objectives to work towards
Re students with KTH doctoral student employment
Achieved result as compared with "doktorandstegen" (the "doctoral ladder"):
Planned time of reaching next step of "doktorandstegen":

Planned extent of teaching effort, incl. type of same; also other duties at Dep level, next year

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Ladder% <= achievements
Supervisor points

• Economy: dept head, school heads (Gulan+Dani) – not FA

• Hiring a PhD student

• Supervising a PhD student: rapid start-up, plan to have time for meetings

• More regulations on PhD supervision/PhD work
  – Better conditions and better training valued by today's students
  – Makes us more attractive for applicants
  – Makes enrolled students more creative
Suggestions?

Suggestions?
How can fu-adm, Henrik/Dilian and I assist you?

Contact: fu-adm@csc.kth.se, fuansv@csc.kth.se
PhD studies

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Result based work

• Research shares with other work which involves a creative process the need to produce results
  • Authors
  • Composers
  • Painters
  • Self-employed at own company
Competitive work

• Research shares with other work which has limited resources a competitive funding
  • Musicians
  • Athletes

Creative work

• No universal recipe how to get results
• This is why research is ”high risk”
Time vs. Results

A PhD position lasts 48 full time months
Use deadlines to manage follow-up of results

PhD completion (courses, thesis, dissertation) is result based
Scientific work means solving (sub) problem A, producing (sub)result B, etc
What to do if consumed time $>$ results

There is no universal recipe for scientific discoveries.

But several obstacles are common and can be identified by project planning tools:

What are the limiting factors? Identify where/when/how you get slowed down.

Do you need to know additional techniques or tools?

Is the project idea sufficiently well defined and the strategy to solve the problem sufficiently structured?

Does it seem likely the project can be finished within acceptable time? Or is it too time consuming or too hard?

Can any (partial) results be published/presented?

Consider new projects that better match interests and competence of research group and PhD student.

Something must change - don't hope it will be better automatically. Don't end meetings without an explicit agenda of what to change and how to proceed.

The slower it runs, the more frequently you need to meet and evaluate progress.

The harder you feel planning is to do, the more you need to do this.
Working hours

- Arbetsrätten (employment law) dictates 40h/w
- Student can on own initiative work more – no lock out
- Supervisor can discuss priorities, structure work
- Be clear about level of ambition of department when hiring new students
Time: After 48 months full time

- PhD student position ends
- If funds are available and if projects can be found it is OK to get hired as e.g. research assistant
- Status of PhD student remains
- Activity level must be set (result based)
- Supervision effort according to activity level
PhD studies

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PhD studies

Congratulations to joining the highest and most expensive training of the university

Research

Courses

Department work (teaching, system management etc.)
PhD studies

Research

All activities contributing to realization of PhD defence

Product

You knowing the art of doing science

Articles, programs, patents etc

PhD awarded for successful PhD defence and completed course work

Lic defence at mid-point
PhD studies

Courses

Computer science 60-90 hp
Mediated communication 60-90 hp
Numerical analysis 100 hp
Physics 60 hp
Stockholm U DA 90 hp, NA 90 hp

Min 60% PhD level
Grade P/F
Special rules may apply for some programs
PhD studies

Department work (teaching, system management etc.)

Max 20% effort

Work experience for future professional work

• Teaching for academic positions
• Student supervision for management positions
• System management for engineering positions
Life as a PhD student

Balance research, course work and dept. work
Balance professional work and private life

Work
Personal health
Social activities
Research projects

Scientific work is result based (c.f. author, artist)

Scientific funding is competitive (c.f. musician, athlete)

Scientific work is high-risk, not all projects lead to publishable results

All PhDs experience up- and downs

  Beliefs in your own capacity
  Beliefs in the value of the project
  Beliefs in your supervisor

Scientific discoveries are not predictable, but work strategy and planning is.
PhD ladder

PhD defence level

Quantity x Quality

Research accomplishments

Time

48 months

PhD position ends
Individual study plan

Keep track of
- Course work
- Research progress

Evaluate past year

Plan next year

Send in once a year + “ladder” steps
Final words

Meet with other PhD students, faculty
Find balance
Feel free to contact me, Erik Fransén, 08-7906902, fuansv@csc.kth.se

Good luck!
Paper work

Form for admittance to PhD studies
Form for licentiate defence
Form for PhD defence
Study plan

See PhD study handbook

www.csc.kth.se → Education → Doctoral programs