Master theses at EECS

ANALYSIS AND SUGGESTIONS FROM THE WORK GROUP

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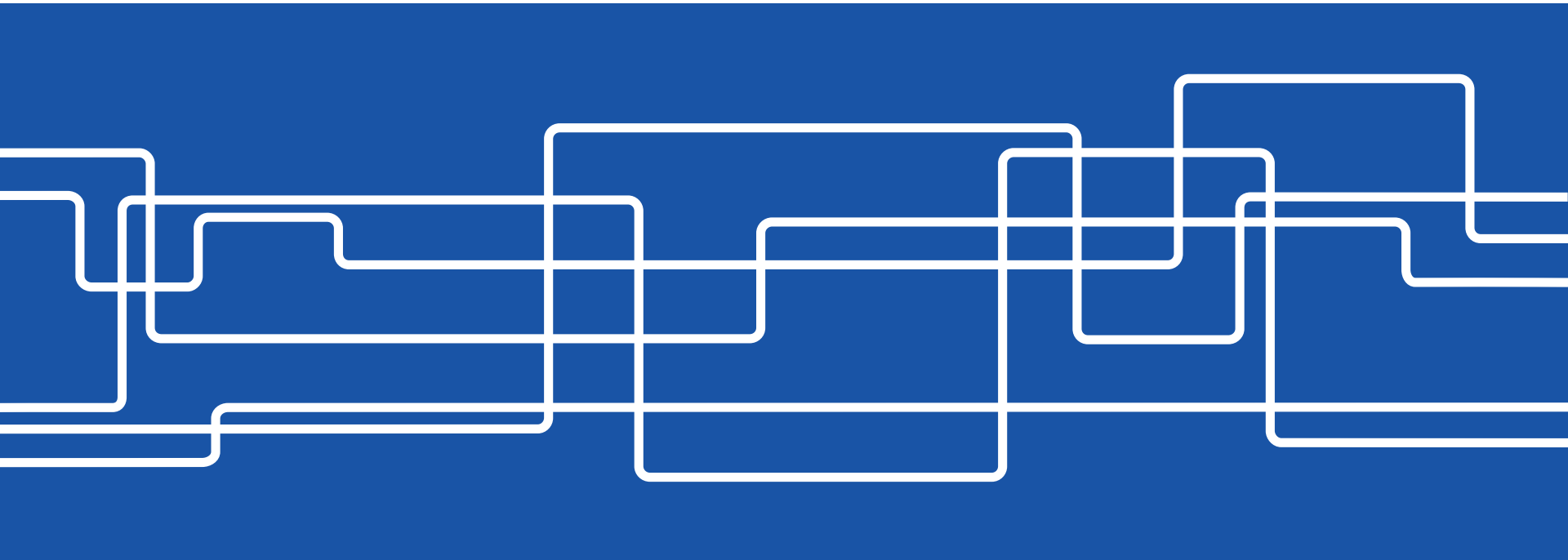
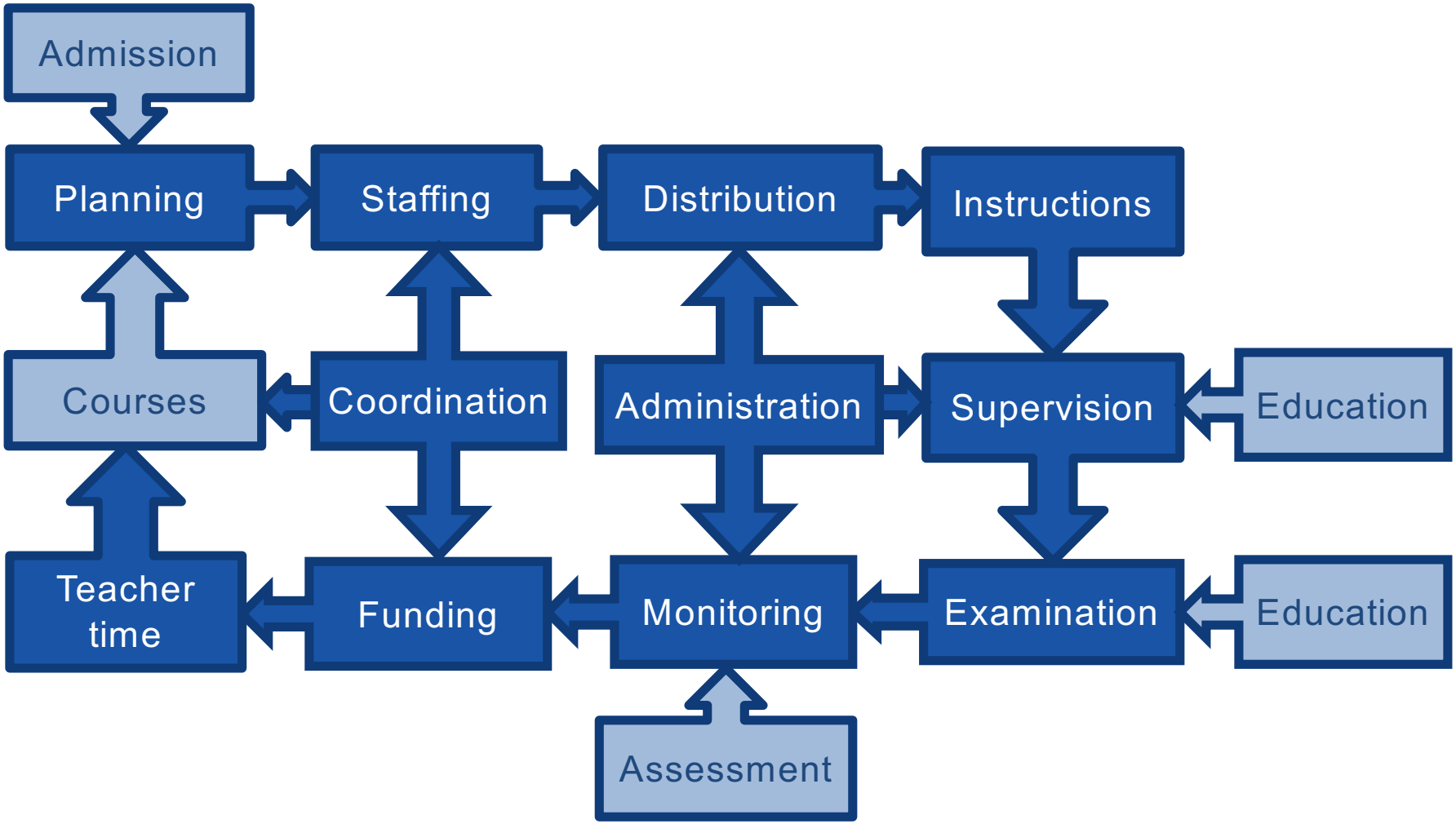


The MSc thesis cycle



Planning

Requirements for MSc thesis:
- >240 hp
- BSc level completed *(-1 course to avoid exceptions?)*
- Course in scientific methodology
- All mandatory master courses *(-1 course?)*
- All mandatory courses in master specialisation

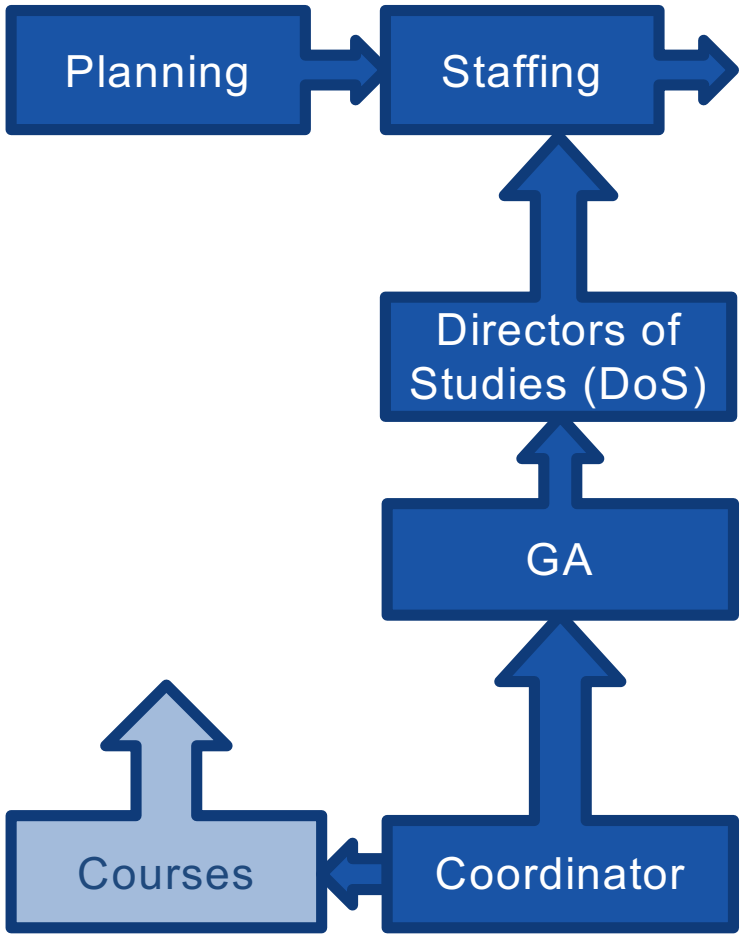
Requirements for BSc thesis: 120 hp

Per program estimate by coordinator for next year of:
- BSc theses
- MSc theses
  - *Per specialisation*

(based on registered students in preceding courses)

One course per MSc/BSc program:
”MSc thesis in [HUVUDOMRÅDE] with specialisation in [PROGRAM]”, “BSc thesis in [TEKNIKOMRÅDE]”

Coordination and staffing



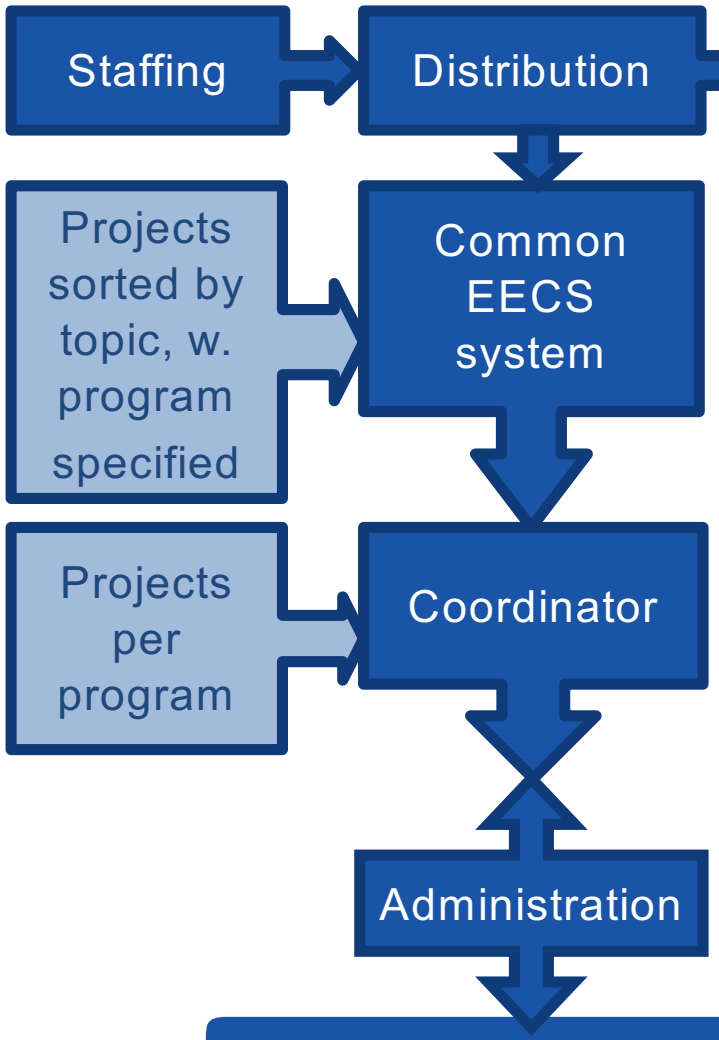
4. DoS plans with every teacher at the department/division how many MSc and BSc theses the teacher should supervise and examine *each period*

3. Each department/division commits to supervise and examine a planned number of theses

2. GA responsible for summing up the needs and negotiate the distribution between departments

1. One coordinator per MSc, BSc program = course responsible
(may be shared between programs, but should have close contacts with PA)

Distribution



Long term?

Conference bidding system:

- Proposals submitted
- Examiners/supervisors bid for (broadly) suitable projects
- Distribution based on bids
- Automatic assignment up to staffing level
- Examiners/supervisors confirm projects

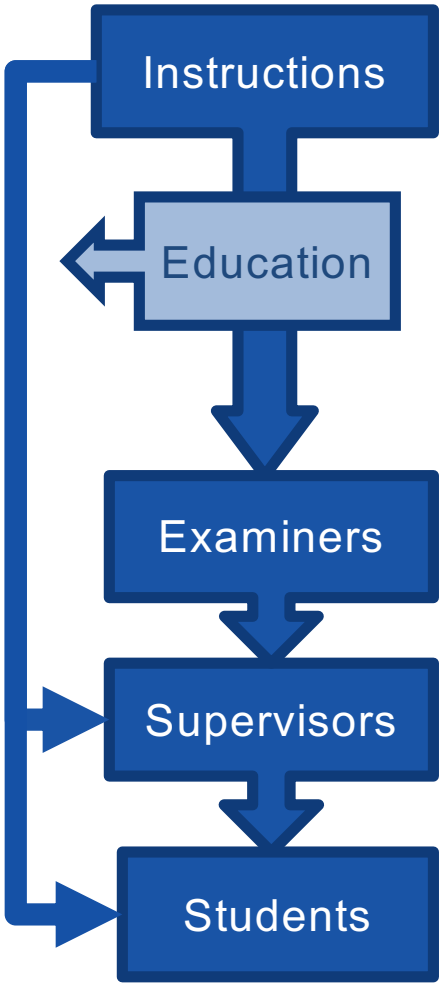
Short term?

"First in first served" system:

- Proposals submitted
- Examiners/supervisors pick suitable projects
- Forced assignment up to staffing level
- Examiners/supervisors confirm projects

Registration of project topic, supervisor, examiner in CANVAS course.
NO paper forms to be signed

Instructions



- Common general instructions for EECS regarding standard requirements + tips
- Program (course) specific instructions regarding practical details and within-course requirements (program “flavour”).
  - No conflicts allowed between EECS and program-specific instructions
  - No larger differences (quality + inter-program-supervision)

Working group

Coordinators

Starting & presentation times?

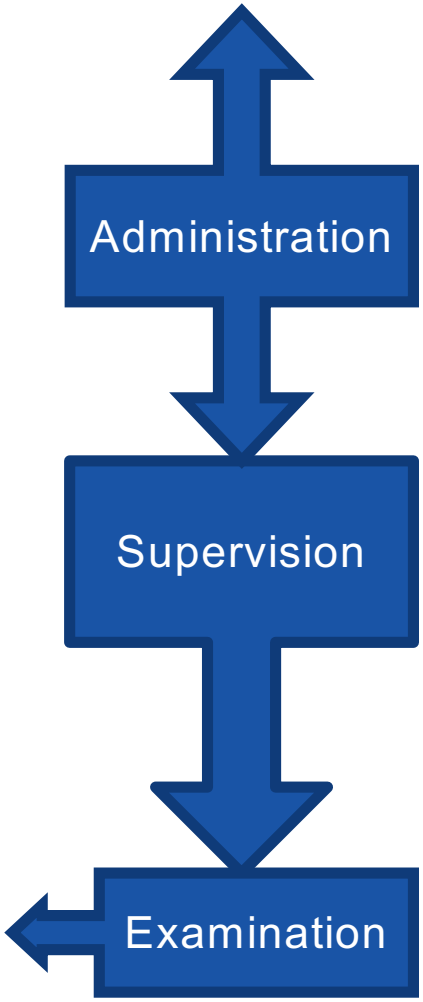
Compulsory LH219V or crash course

Recommended LH219V or crash course

Joint large-scale supervision meetings per program for general help & feedback in addition to group/individual supervision?

Peer learning for supervisors

Follow-up during supervision



Course examination in CANVAS gradebook
(specification, literature study, seminar attendance, preliminary report, presentation, opposition, final report)

Submissions made through CANVAS

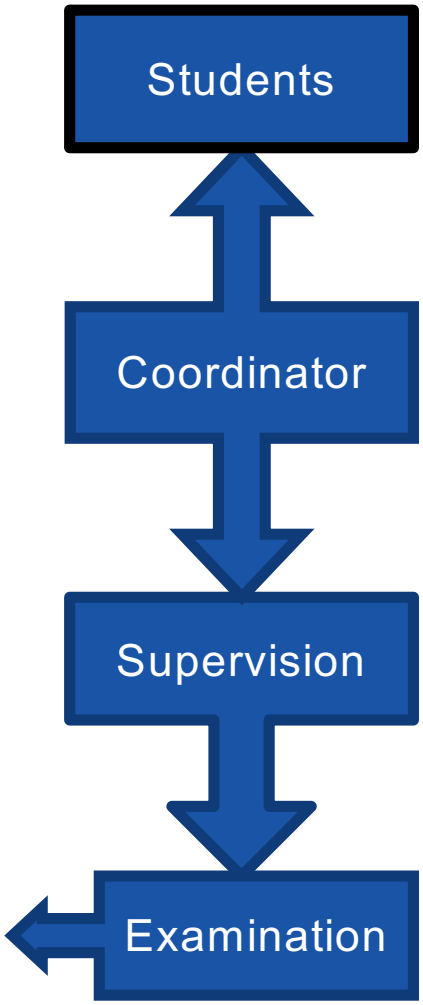
Requirements grouped into subparts
PRO1, PRO2, PRO3

Supervisor or examiner reports
PRO1, PRO2 in Ladok3

Coordinator reports
PRO3, finished course in Ladok3

Examiner approves
PRO1, PRO2, PRO3, course in Ladok3

Presentation and opposition



5. Signs up for opposition through CANVAS

6. Opponent submits opposition protocol in CANVAS

7. Presenter submits response to opposition in CANVAS

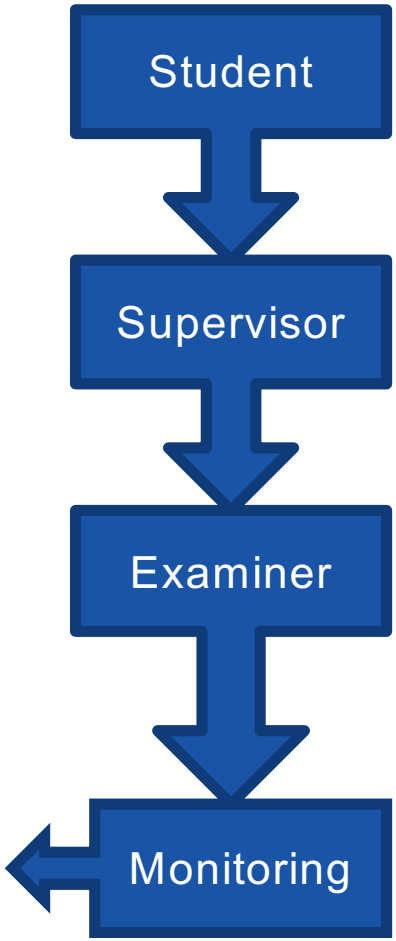
3. Schedules and announces presentation in CANVAS

4. Has created opposition protocol in CANVAS

1. Pre-approves for presentation in CANVAS

2. Approves for presentation in CANVAS

Examination



1. Self-assessment protocol handed in CANVAS together with presentation report

2. Supervisor assessment protocol submitted in CANVAS when presentation report accepted

3. Automatic plagiarism check through CANVAS

4. Examiner assessment protocol submitted in CANVAS when final report accepted

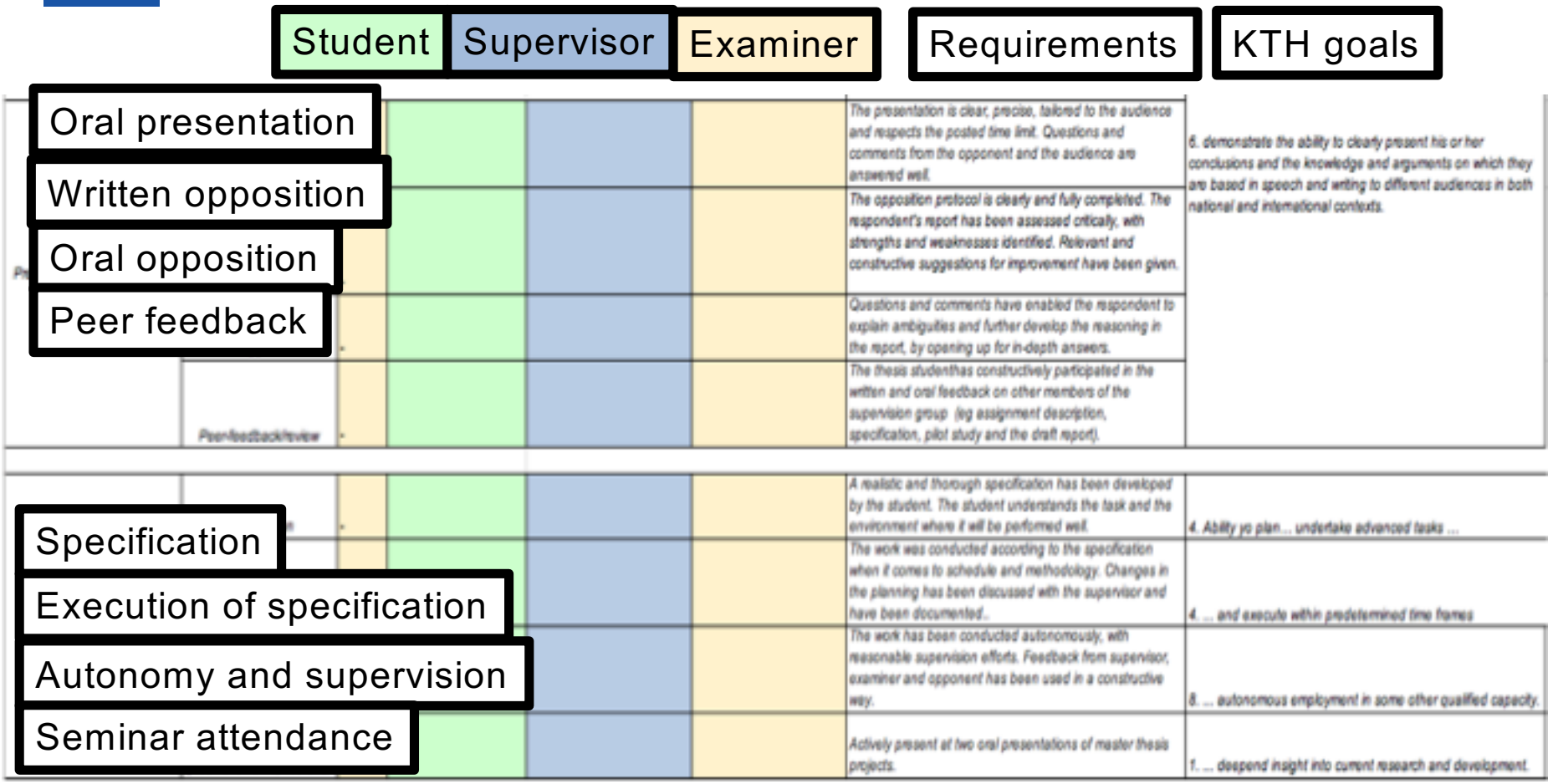
5. Assessment protocol saved in CANVAS (or archived elsewhere) for program evaluations

Assessment protocols

(CSC example)

Assessment component	Student	Supervisor	Examiner	Requirements	KTH goals
Introduction				The studied problem is clearly defined, scientifically relevant (sufficiently complex) and possible to evaluate. Conditions and limitations described.	3. Ability to identify, analyze, assess and deal with complex phenomena, issues and situations even with limited information
Background				The scientific field of work is well introduced. The background contains a written review of previous research and development, and the student's own work is designed in acceptance with the conclusions of this review. Work	1. knowledge of the disciplinary foundation of and proven experience in his or her chosen field of technology ... 1. insight into current research and development work. 2. ability to holistically, critically and systematically, seek, gather and
Methods				The selected method is adquate scientifically or from an engineering perspective, well presented and applied correctly. Relevant knowledge from the education is used correctly.	1. ... and demonstrate specialised methodological knowledge in the main field of study.. 4. ... using appropriate methods, undertake advanced tasks...
Results					
Evaluation					
Discussion					
Sustainability & Ethics					
Societal aspects					
Language & Formalities					
structure, terminology	-				

Assessment protocols



Now in Excel… → Should be form in CANVAS

EECS template for opposition protocol:

(ICT example)

- Overall
- Abstract
- Introduction
- Problem definition
- Boundaries
- Disposition
- Method
- Data collection
- Data analysis
- Conclusions and discussion
- References

- Language and technical performance
- Honesty and critical distance
- General impression
- Other issues
- Appendices

Questions to the presenter

Guiding questions for each assessment area

Opposition and self-assessment forms should be similar

Now merely instructions… → Should be form in CANVAS

Monitoring and administration

Automatic (?) TRITA number assignment

Automatic (?) DIVA publication

Ladok3 registration + electronic approval

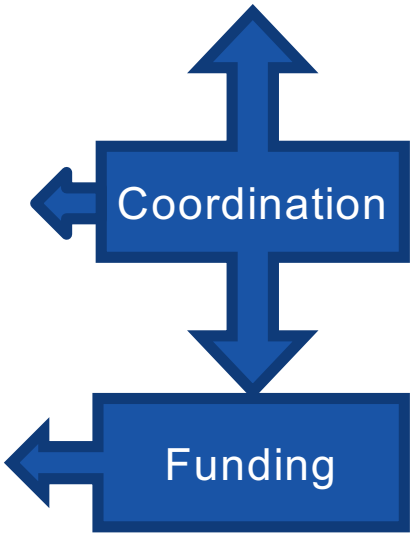
Number of theses (+ PRO1, PRO2) finished
- Per program
- Per supervisor
- Per examiner

Examiners/supervisors can check status

Time limit check

Course evaluation per course (= program)
by course responsible

Funding



Funding for course coordination from EECS (fixed amount depending on number of students in the program)

Funding to division based on
- completion of thesis (or PRO1, PRO2)
- supervision (75–80% of total sum)
- examination (25–20% of total sum)

Total sum for completion of theses:
≈40 kSEK/MSc thesis (PRO1, 2: 10, 20 kSEK)
≈20 SEK/BSc thesis

Funding at School level to avoid the need for transactions between divisions for shared theses

Teacher time and staffing

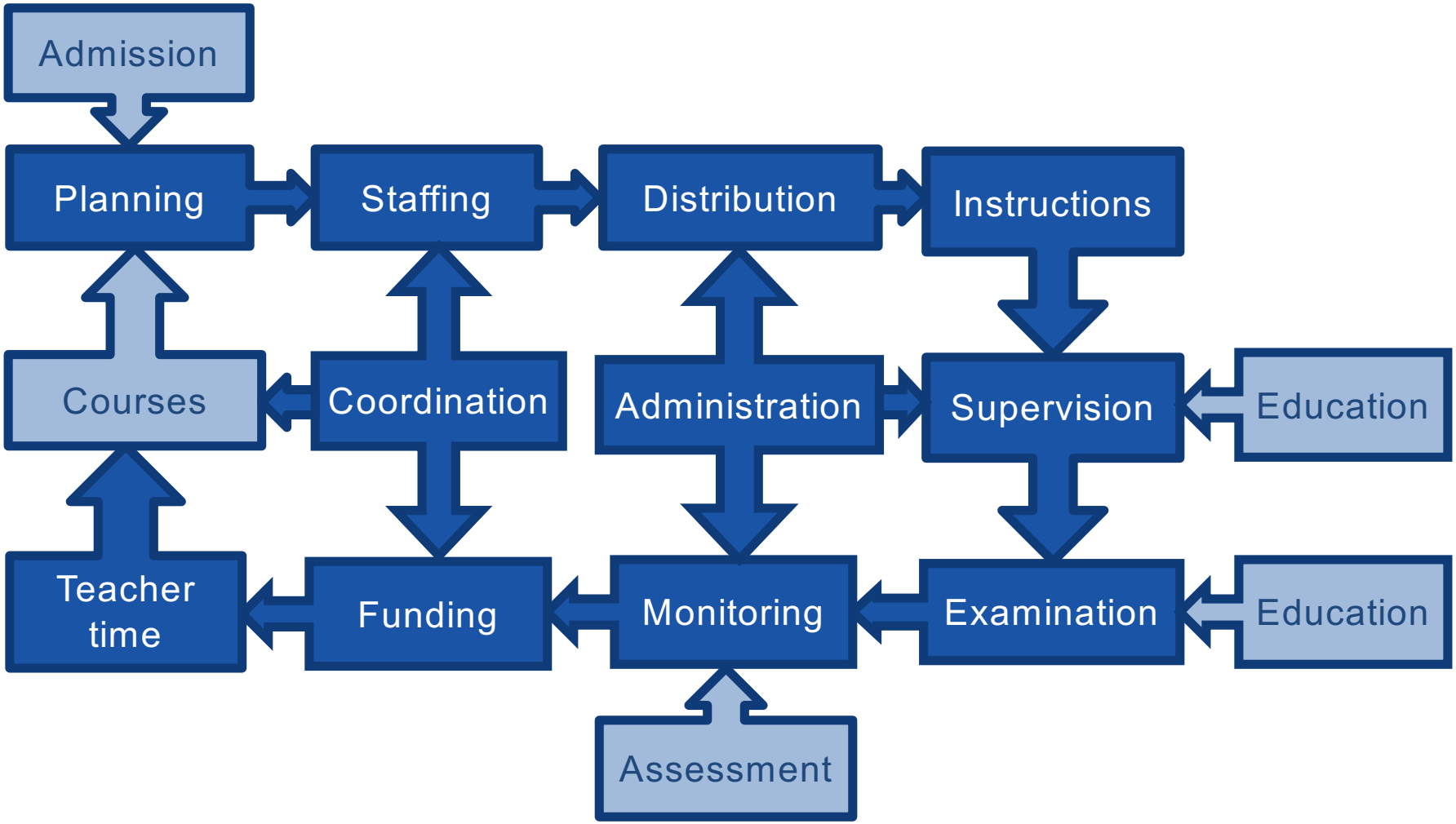
Follow-up and adjustments to staffing made to take the actual number of supervised/examined theses into account.

Coordination between course responsible and directors of studies regarding staffing.

The number of teacher hours for supervision/examination

- can in principle be negotiated at the department level (funding in, teaching hours out)
- but the default must in practice be similar over EECS (due to inter-department exchange)

Iterate and improve



Discussion and suggestions