

# Thesis Processes

Thesis Supervision Course - September 18, 2024

# Roles

- A **supervisor** guides students as they complete their project.
  - A supervisor should meet frequently with students.
  - A supervisor should provide frequent feedback on the project.
  - A supervisor should *not* do the project for the students.
- An **examiner** determines whether a thesis is satisfactory.
  - An examiner will assess the thesis *proposal*, make a *half-way assessment*, and assess the *final thesis* (in written and oral form).
  - An examiner will provide *occasional* feedback, but is not responsible for guiding the students.
- Each thesis has **1-2 supervisors** and one **examiner**.
  - These are never the same person.

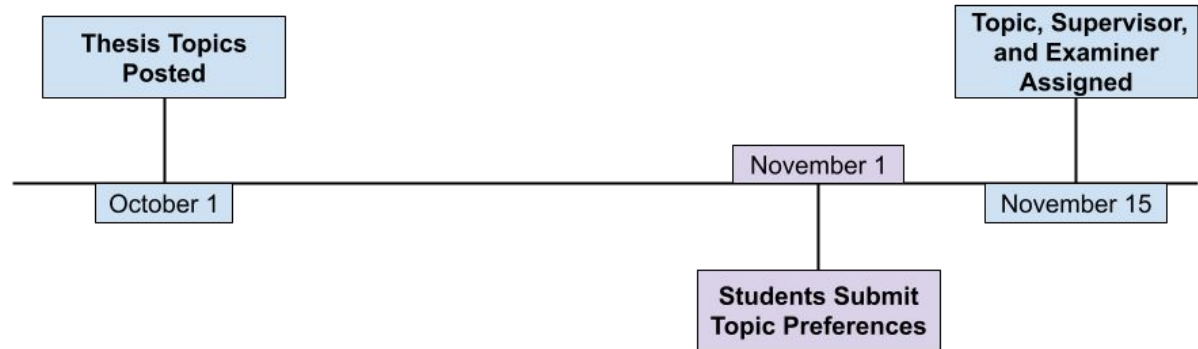
# Examiner-in-Practice

- Ph.D. students, post-docs, and assistant professors (who have not completed pedagogical credits) *cannot examine theses directly*.
  - You will serve as “**examiner-in-practice**”.
  - Your supervisor will serve as the official examiner, but you will complete the same duties (with your supervisor having the final responsibility).
  - Make sure they know this!

# Getting a Thesis Topic, Supervisor, and Examiner

<https://chalmers.instructure.com/courses/9162>

- **By October 1:** Supervisors post their own topics.
  - General topic areas (mandatory) and specific topics (optional)
- **By November 1:** Students submit “bid” for topics.
  - 3-5 topics, ranked by preference. At least one proposed by students.
- **November 15:** Students assigned topic, supervisor, and examiner.



# Thesis Topics

- Topics must relate to **software engineering research areas**.
  - Broadly defined.
  - Starting point: SWEBOK list of topics.
    - Generally... some connection to process, requirements, architecture, quality, testing, maintenance, or operation of software systems.
- There must be a **clear research problem to be solved**.
  - “Developing a system that uses AI to screen job applicants” is not a research project.
  - “Testing of AI-based systems with complex input” is a research project.
    - The “job applicant screening system” is a case study in the research.
  - (**Exception:** Engineering-Based Bachelor’s Theses)
    - Still must be some research-based assessment.

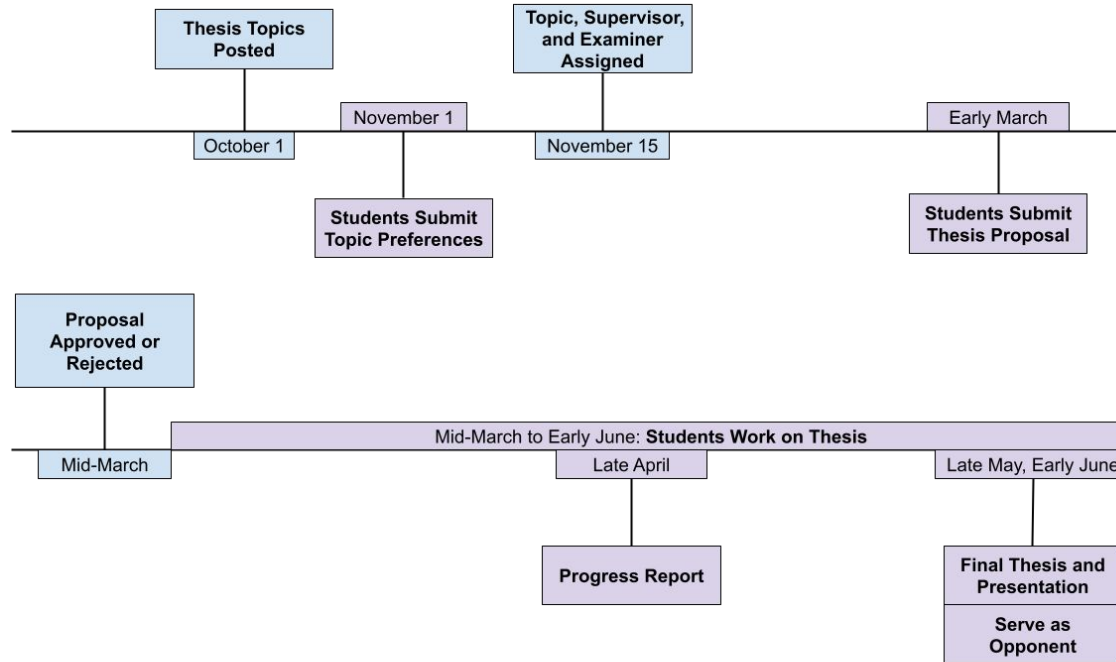
# Bachelor's Thesis: At a Glance

- One study period (15 credits)
  - Research-based/Engineering-based have **same process, different expectations.**
  - **Thesis almost always done in SP4.**
  - Three proposal deadlines:
    - **March 8, to finish in May**
    - *April 5, to finish in August*
    - *September 13, to finish in January*

# Bachelor's Thesis

<https://canvas.gu.se/courses/122370000000072522>

(changes each year)

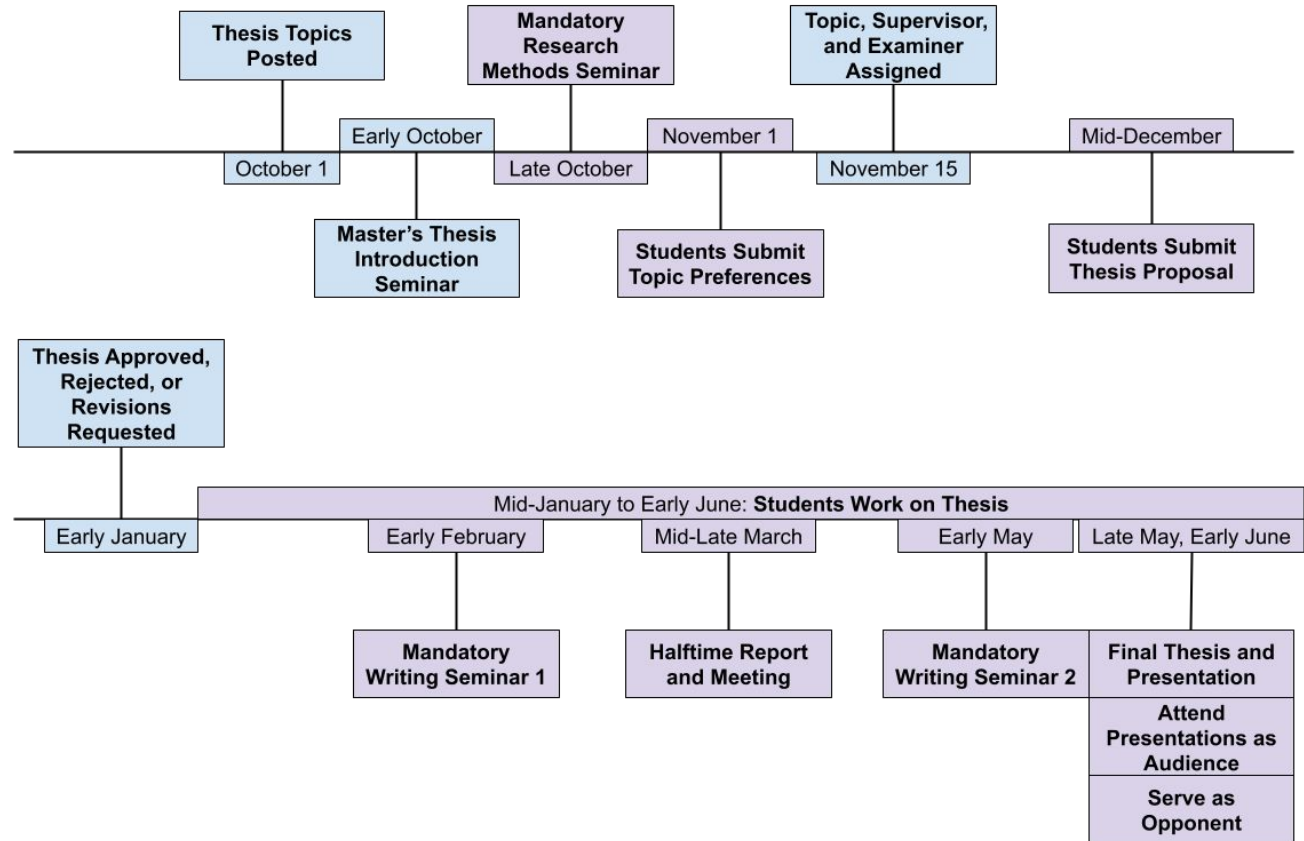


# Master's Thesis: At a Glance

- Two study periods (30 credits)
  - Any two consecutive study periods.
  - **Almost always SP3 and 4.**
  - Four submission dates per year for proposal.
    - August 23 (SP1-2)
    - *October 26 (SP2-3)*
    - **December 13 (SP3-4)**
    - *Early March (SP4-1)*
- Can also be four study periods (60 credits).
  - Program manager needs to approve.



# Master's Thesis



# Thesis Proposal

- **Bachelor's Thesis**

- Introduction
- Literature Review
- Methodology
  - Research Questions and Hypotheses
  - Research Methodology
  - Threats to Validity

- **Master's Thesis**

- Introduction
- Problem Statement
- Purpose of the Study
- Literature Review
- Research Questions and Hypotheses
- Methodology
- Limitations and Delimitations
- Significance

# Thesis Proposal

- Should give impression that students can complete the project.
  - Lit review does not need to be exhaustive.
  - Methods do not need to be final.
  - Should be detailed enough to convince examiner that project can start.
- Verdict from examiner:
  - Bachelor's: Accept, Reject (resubmit next deadline)
  - Master's: Accept, Reject (resubmit next deadline), Revise (1 week)

# Progress/Halftime Report and Meeting

- **Bachelor's Thesis**

- Mid-April
  - Hard deadline for report.
  - Meeting < 1 week later. Students arrange with examiner.
- Report submitted on Canvas
  - Current thesis draft.
  - (Almost) Complete Introduction, Related Work, Methodology
  - Data collection started or plan for when data will be collected
  - First draft or version of a prototype (if applicable)

- **Master's Thesis**

- Generally late March to first week of April.
  - Can be later if the student is struggling. Should be when they are actually ~50% done!
  - Student books with examiner.  
**Submits report 1 week before.**
- Report submitted via e-mail and on Canvas (plagiarism check)
  - Same expectations as bachelor's.

# Halftime Meeting

- **During meeting:** presentation and discussion
  - Short presentation on status, changes since proposal, time plan and overview of remaining work, specific questions for examiner.
  - Examiner may request other points too.
  - Supervisor should try to attend, but is not required.
  - **Same for bachelor's and master's.**

# Final Thesis Report

- **Bachelor's Thesis**

- Hard deadline for thesis (late May).
  - Submitted on Canvas.
- Presentations booked by thesis coordinator for a specific day (end of May).
- Thesis follows specific template.
  - 10 pages of text + cover pages + appendices. Can be slightly longer, but only if important.
- Examiner may request changes after presentation.
  - Submitted 1-2 weeks after presentation on Canvas.

- **Master's Thesis**

- Student books with examiner.
- Pre-booked rooms in last three weeks of semester, but presentations can happen other times.
  - Except mid-June to mid-August.
- **One week before presentation, thesis submitted to examiner and opponents via e-mail.**
- Recommended template offered.
  - Changes are ok.
  - No page limits.
- Examiner may request changes after presentation.
  - Submitted 1-2 weeks after presentation via **E-mail and Canvas.**

# Thesis Presentations

- **Bachelor's Thesis**

- Students serve as opponent for another group. Submit opposition report on Canvas.
- Presentation is 20 minutes:
  - 10 minutes for presentation
  - 5 minutes for opponents
  - 5 minutes for examiner

- **Master's Thesis**

- Students must attend two presentations as an audience member.
- Students serve as opponent for another group. Submit opposition report to examiner via e-mail and on Canvas.
  - Does not count as “audience”.
- Presentation is one hour:
  - 25 minutes for presentation
  - 15 minutes for opponents
  - 15 minutes for examiner
  - 5 minutes for audience

# Lars Pareto Travel Grant

- If you publish a conference paper based on a thesis.
  - Bachelor's or Master's
  - Within one year of graduation
- Funds 15K SEK per student.
- Application form sent to Roger/Niklas.
- Talk to me and I will help.

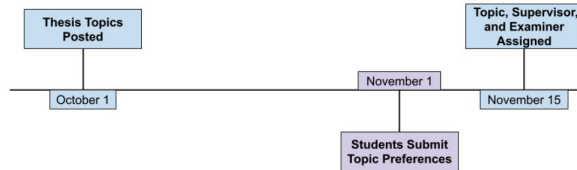


# Questions and Discussion

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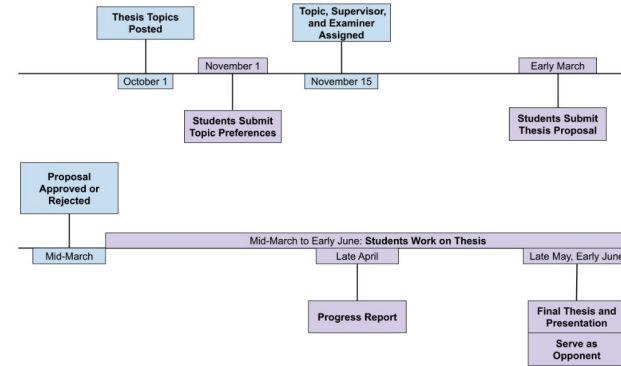
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## Bachelor's Thesis

<https://canvas.gu.se/courses/12237000000072522>

(changes each year)



<https://chalmers.instructure.com/courses/16233>

## Master's Thesis

