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THE RENOVATION OF THE B.ENG THESIS PROCESS

In the SCHOOL OF SMART SOLUTIONS OF METROPOLIA UAS

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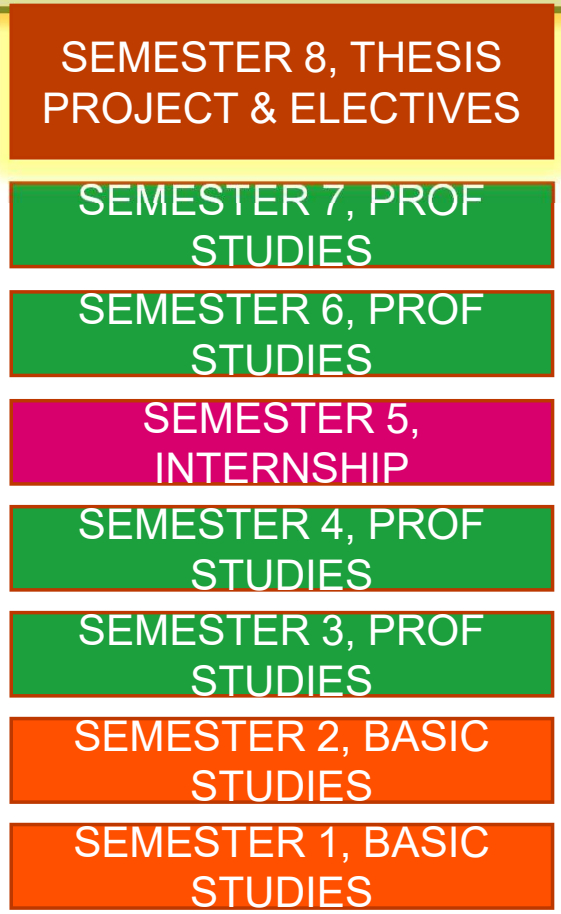
Metropolia

U!REKA
EUROPEAN UNIVERSITY

Background: Engineering Studies in Finnish Universities of Applied Sciences (B.eng)

- 240 ECTS
- 8 semesters
- The final year project + Thesis (15 ECTS, ½ semester, 8-10 weeks)
- Individual industrial projects (mainly)
- Usually nominated supervisors from the UAS as well as the company



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Metropolia UAS

TURNOVER **134,6 M. €**	**1145** PERSONNEL	**4** MODERN CAMPUSES
85 DEGREE PROGRAMMES	**18 195** STUDENTS	**2819** BACHELOR'S AND **610** MASTER'S DEGREES
1,7 MIILLION VISITS ON METROPOLIA.FI WEBSITE	**57 100** LINKEDIN FOLLOWERS	**950** PUBLICATIONS

School of Smart solutions

- Bachelor Programmes in English:
  - DP in Electronics
  - DP in Smart Automation
  - DP in Laboratory Analysis

- In Finnish:
  - Electrical Engineering
  - Automation Technology
  - Laboratory Analysis
  - Chemical Engineering
  - Energy Engineering

Problem Statement: Delays and Funding Impact

- Projects often exceed one semester from definition to documentation
- Delays prolong studies and affect graduation rates
- Ministry funding linked to (timely) graduation
- Current graduates:
  300–350 vs targets: 400 (2025), 450 (2026)

Development Project 2024-2026

- Launch autumn 2024
- Pilot #1 spring 2025
- Pilot #2 autumn 2025 / spring 2026
- Full force autumn 2026
- Goals:
  improve graduation rates
  shorten the delays in the thesis process
  meet the graduation targets

Problems in the current process

- difficulties in finding industrial projects
- projects being too large / demanding
- industry partner engagement
- limited guidance by the thesis supervisor
- students working or taking other courses in parallel
- the laboratory projects (not in the industry) too time-consuming for the supervisors / advisors.
- students working without much peer support
- the process not clearly defined

Means of Improvement

- ❖well defined project with clear deadlines etc.
- ❖interim reviews
- ❖less emphasis on industrial topics
- ❖implementations for student groups of 10-20
- ❖one dedicated supervisor / advisor per implementation
- ❖new types/models of projects: besides the traditional industrial ones, also diary / portfolio based ones, topics from the staff members or students themselves

The Pilot Project / Spring 2025

- only students having problems finding industrial project topics
- i.e. …
- 10-30 students per implementation (duration 12 weeks)
- altogether 50-60 students in 3 implementations
- dedicated process supervisor / group
- additional substance advisors for students
- topics mostly from the substance advisors

Results and Feedback / Criticism and Opposition

- 65% graduated in the 12 week window
- 20% later, 15% lost / dropped out
- the roles of the two supervisors / advisors not clear at all
- many of the projects two demanding for these students
- workload of the lab stuff increased
- some substance advisors not willing to help in practice
- no formal student feedback collected
- process variations in the three implementations
- opposition by many members of academic staff ….

Next Steps and Roll-Out in 2026

- autumn 2025: process redefinition
- spring 2026: next pilots by that process in each degree programme
- autumn 2026: full roll-out i.e. all thesis projects through the process in the school of smart solutions
- the proposed process:
  8 implementations yearly in each programme
  one single supervisor / advisor per implementation
  research projects (industry, uni), diary based projects, portfolios, shared projects, own topics

CRITICAL DEADLINES / MILESTONES:

→ enrollment [week -4]

→ preliminary project plan in wihi [week -2] => enrollment accepted

→ launch – first group meeting [week 1]

→ language guidance seminar [week 1-2]

→ theory section written - language guidance [week 3]

→ intermediate seminar [week 3-4] => planning phase accepted

→ first version of the project report to supervisor [week 8] => implementation phase accepted

→ maturity test + final seminar [week 8+3]

→ thesis project assessed [week 8+4]