

MAJOR PROJECT

Finished all the theory? Including labs and minors? Now it's time for your major project. Apply the principles of the program to a real-life industrial setting. Use your technical aptitude. Prove your ability to manage a project. And show your skills in communicating, reporting and presenting.

All major projects are motivated by real-life problems. For most students of the part-time program, the research is carried out at your own company. That means a representative of your company is involved to verify:

1. whether the thesis results match the expectations of the company.
2. whether the rated aspects of the master graduation project are relevant for the company.

This gives us valuable feedback on the professional requirements for the intended learning outcomes.

The problem to be solved requires an understanding and active analysis of distinctive disciplines. The project will always include the step from a real-life problem to a more abstract representation of the problem. This restricted representation of the real world is then the basis for the problem analysis. How will you go about this? Using the tools and methods you've learned about in the modules.

The problem analysis then leads to a problem solution. Finally, conclusions are drawn about the extent to which the problem has been solved and the objectives fulfilled.

Learning Outcomes

During the major project you learn to:

1. Analyze and define problems
 - Critically analyze the engineering problem through active communication with the problem owner.
 - Based on this analysis, formulate a problem, come up with feasible approaches towards a solution, draw scientifically valid conclusions and make recommendations, again to be communicated again to the problem owner.
2. Design
 - Systematically translate the engineering problem to a model at an abstract level, (i.e. reducing it to its essentials in terms of model and problem requirements).

- Validate results against the real-life situation and problem formulation.

3. Test

- Systematically translate the engineering problem to a concrete level.
- Validate results against the real-life situation and problem formulation.

4. Manage work processes

- Place engineering activities within the perspective of engineering company processes, including quality control principles.
- Incorporate the economical (cost) and societal (safety, sustainability) consequences in the design or development process.

5. Conduct research

- Gain specialized scientific knowledge and skills in the field of engineering.

6. Communicate and collaborate

- Work on a problem within a multidisciplinary context in an industrial environment.
- Work on a problem in an international engineering context in an industrial environment.

7. Work on your professional development

- Through self-reflection, improve one's own professional performance

Procedure

The project is completed during a period of 10 -12 months (study load of 840 hours). You'll be supervised by a HAN staff member and an industrial supervisor from your company.

This project requires you to prove your ability to manage a project. You'll also need to demonstrate your skills in communicating, reporting and presenting.

You conclude the project by writing a thesis, which you present in an oral examination to a panel. On the panel will be your two supervisors and an independent examiner (HAN).

Project setting

In the part-time program, the major project is generally done at your own workplace. There are conditions though. The company needs to be able to provide a proper assignment, working environment and support. If this is not the case, you may opt to complete the project in a research setting. At HAN University of Applied Sciences or at one of our many partner universities.