

Supervision and Assessment Committee Bachelor Assignment AT

Version May 27, 2019

Main objective of the BSc-assignment

The main objective of the bachelor assignment is for the student to demonstrate that knowledge and skills acquired during the AT bachelor program can be applied successfully in a final individual assignment of sufficient level for a science & engineering bachelor degree.

Supervision

The student performs scientific research of a limited size and profundity under the supervision of a member of the scientific staff.

During the first weeks of the assignment, the student has to define a research plan in accordance with the daily supervisor and the Bachelor Assignment Committee. The assignment is completed with a written report (the BSc-thesis) and a public oral presentation including Q&A.

An external member is added to the committee to ensure that the BSc assignment is assessed at the same level as other BSc assignments.

Task for student:

1. Analyze a problem with some complexity, using domain-independent technical and analytical skills as learned in Advanced Technology.
2. a. prepare, execute and analyze experimental or theoretical research in Advanced Technology.
b. design, build and validate a device.
3. write a scientific report describing the result.
4. give an oral presentation of the results to an audience of peers and is able to answer questions on the subject.
5. be self-sufficient in organizing the work.
6. collaborate and interact with the staff of a research group

In short:

Students should learn to apply (experimental or theoretical) research and/or design methodology; all of limited size and profundity, supervised by scientific staff; and inform an audience about this. AT students have been educated as T-shaped professional. The BSc assignment should provide proof of being able to reach sufficient depth (not width).

This means that the *supervisors* should:

- Be knowledgeable in the research area of the assignment
- Have insight into the required domain-specific skills, and the definition of 'professionalism' (vakbekwaamheid) within the domain of the assignment
- Be knowledgeable in research and/or design methodology
- Be competent in supervising/coaching (on content, research, design, writing, etc.)
- Be competent in assessing written reports, oral presentations and general engineering skills (problem solving, analyzing, planning, cooperating, etc.)

For the members of the Assessment committee this means that:

The *chairperson* should:

- Be knowledgeable in the research area of the assignment;
- Make sure the committee works together well;
- Be competent in supervising/coaching (on content, research, design, writing, etc.);
- Be competent in assessing written reports, oral presentations and general engineering skills (problem solving, analyzing, planning, cooperating, etc.).

As such the chair acts as examiner of the bachelor assignment and should be qualified as such. This means the chair should have sufficient experience in guiding and assessing bachelor assignments and should have a BKO or equivalent qualification.

The *daily supervisor* should:

- Be competent on the topic of the assignment
- Supervise/coach (on content, research, design, writing, etc.)
- Have a insight into the required domain-specific skills, and the definition of 'professionalism' (vakbekwaamheid) within the domain of the assignment
- Be competent in assessing written reports, oral presentations and general engineering skills (problem solving, analyzing, planning, cooperating, etc.)

The *External member* should:

- Make sure that the student is assessed at the right level by bringing experience with assessing other bachelor assignments.

In general, at least one member of the assessment committee should be familiar with the AT program and students as lecturer or otherwise. This is also taken into account when appointing an external member. In case the chairperson has no previous experience with the AT bachelor assignment, a member of the AT examination board is appointed as external member in order to safeguard the assessment quality and procedure.