



Curriculum part 5 - 2014

Bachelor of Software Development

Professionsbachelor i softwareudvikling

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1. The purpose of the Bachelor project on Software Development programme

To finalise your studies, you have to complete a Bachelor project either alone or together with one or two fellow students. The purpose of the Bachelor project is for the student to document his/her ability to process complex and practical issues relating to a specific IT-related task using an analytical approach and relevant methodologies. The Bachelor project must address the key issues covered in the Software Development programme and the scope must be equivalent to 15 ECTS credits.

The purpose of the Bachelor project is to promote both your professional and your personal development. In other words, you need to develop your skills by:

- solving a practical problem, in principle based on a private or public company/organisation
- applying theory and methodologies taught in the degree programme to a practical issue
- combining knowledge from several subject areas
- preparing the necessary documentation to substantiate the methodology and validity of the proposed solution
- processing, analysing and evaluating gathered information
- reflecting on the choice of methodology, techniques and tools used in the solution
- suggesting a solution or parts thereof, for example in the form of a concrete application.

2. Topic of Bachelor project

The topic of the Bachelor project is formulated by the student together with the supervisor and preferably also in collaboration with a company.

It is up to you to prepare a problem statement for the project in collaboration with the company in question and the Academy's supervisor. Use your supervisor during this phase. The supervisor must approve the subject and the problem statement.

The description of the project will form the basis of the assessment of the academic and educational level of the project.

It should be 1-2 A4 pages long and contain:

- Title
- Name of company/organisation, including contact person and the degree of participation of the company/organisation, such as individuals and other demands/requirements to the company/organisation.
- If you work on the project as a group, the names of the participants
- Background and purpose of the project
- The expected outcome of the project in the form of a very brief description of the products you expect to develop.

Projects consisting merely of descriptions do not qualify.

If you are two or three students completing the project together, the problem statement and report should provide a more in-depth and thorough treatment of the topic to warrant the participation of two or three students. Each of you has to contribute an amount of work towards the shared project that equals the amount of work provided by a single student completing an independent exam project.

The oral exam is individual and each student must be able to defend the entire project.

3. Formel requirements

The student must have passed all previous exams, including the internship exam, to be permitted to complete the Bachelor project.

For students on the Software Development programme:

The actual project excluding the table of contents but including the list of references should be max 40 pages per student, if the student writes alone, and further 20 pages per following students, if the assignment is made in a group. Footnotes, etc. also count. One page corresponding to 2,400 characters including spaces per page.

The table of contents, bibliography and appendices do not count towards the total number of pages.

It should be possible to read the entire text without referring to the appendices (appendices are not subject to assessment).

The project should not contain any quotations without source references. The project must use a referencing system that ensures that the reader always knows, or is able to look up, the sources of statements, tables or models.

Quotations without references are deemed to be plagiarism and can result in the project being rejected.

If the project contains programming this should be uploaded in Wiseflow as an appendix in pdf format. A zip file containing the source code should be uploaded in Wiseflow as well in the format and structure in which the project has been made.

You must prepare an extensive bibliography and list of appendices in accordance with the **Harvard standard** (always available on the library website).

You should also use notes for detailed explanations, specifications, referrals, etc.

For further hints about the bibliography, etc. see the memorandum "*Tips and advice final project*" on frontier.

3.1. Front page

The front page of the project should include the title of the programme, the names of the educational institution and the student(s) submitting the project, class, supervisor, the title of the project, the name of the company and the date of submission. You should also indicate the scope of the assignment divided on report and appendices.

If the project is confidential, this should be indicated on the front page. In that case, the project will not be made publicly available at the library.

The front page should also include a synopsis, which is a brief description of the project (i.e. purpose and results). It is preferable if the description is sufficiently comprehensive to enable curious outsiders to get a clear picture of what the report contains. In other contexts, the rule of thumb is that the synopsis should be max 200 words.

The project can be structured as suggested below.

3.2. Table of contents, etc.

The project must include a table of contents showing the structure of the project in headings and sub-headings with corresponding page numbers.

If the project includes programming, you should agree with your supervisor whether all coding has to be printed and included as appendices or whether some or all of it can be submitted on a CD/DVD.

The report must state which group member is responsible for the individual sections.

3.3. Problem statement

- Motivation for the chosen problem statement
- Formulation of the problem statement, e.g. in the form of theories/hypotheses
- Demarcation of the problem, stating reasons

3.4. Methodology

- Presentation and discussion of the methodology used to solve the problem
- A brief presentation of the theoretical approach to the solution

3.5. Brief description

- Brief description of the company – only information relevant for the rest of the project

3.6. Analysis

- Presentation and analysis of gathered information
- Analysis of contexts and cause/effect relationships

- Interim conclusions

3.7. Solutions

- Presentation of the solutions/products
- Critical assessment of the uncertainties attaching to the solution

3.8. Conclusion

- Summary of the main problems in the project with reference to the interim conclusions
- Answers to the theories/hypotheses presented in the problem statement

Remember not to address new problems in the conclusion.

3.9. Appendices

- The project must include a list of appendices unless included in the table of contents. The appendices must be numbered and pages must be numbered sequentially. You should only include appendices to which you refer in text.

3.10. Other formal requirements

The report must be stapled, bound or inserted in a ring binder. Loose components (DVDs, CD-ROMs, etc.) must be attached to the rest of the report.

Please remember to clearly mark each loose component (title, name and exam term/project period).

For information about referencing, etc., see "*Tips and advice final project*" on frontier.

3.11. Collaboration with the company for which the assignment is carried out

Business Academy Aarhus expects that you complete the project in collaboration with an existing company.

The students are normally responsible for finding a company to work with. However, it does occur that a company approaches the Academy, which then establishes the contact. In both cases, the collaboration is primarily your responsibility. There is therefore no direct communication between the company and the Academy. You should pay special attention to the following: preparing a suitable project description, agreeing on meetings, updating the company along the way and concluding the collaboration with a meeting or other form of hand-over of the product.

See also the next section on copyright and confidentiality.

3.12. Copyright and confidentiality

Legally, the general rule is that the copyright automatically belongs to the student, unless otherwise agreed. To prevent problems from occurring at a later stage, this issue should be discussed with

the company at the very beginning, and a written agreement entered into. The Academy's recommendation is that you allow the company to retain the copyright. After all, they are making their resources available to enable a couple of students to complete their degree programme. Alternatively, the company is fully entitled to refuse to participate as sponsor of your main project.

The Bachelor project may also contain information that the company would like to keep confidential. This is not the same as ownership or copyright. The company is entitled to request that business information and the information included in the report be kept confidential. The teacher, the external examiner as well as the students have a duty of confidentiality. A company may request that the report be filed so that it is not made publicly available at the library. This should also, as previously mentioned, be stated on the front page of the project.

4. Supervision

We recommend that you make the most of your opportunities for supervision throughout the project.

A large part of the supervision involves discussing the problem statement, methodology, choice of theory, product development and layout. It is normally necessary to discuss the draft more than once.

The supervisor is not obliged to read your chapters in draft form, and the supervisor also cannot and is not allowed to approve the whole or parts of the project in advance.

It is up to the student to initiate this process. The supervision is governed by the student's questions. It is important to be well prepared for the discussions with the supervisor.

5. Assessment criteria

Your supervisor and an external examiner assess the project and participate in the oral defence.

Grading will be based on a number of general aspects, irrespective of the academic area covered by the project:

Consistency	Is there consistency between the problem statement, the chosen methodology, the content and the conclusions of the project?
Problem	Does the problem statement address the problem, clearly defining its content and scope?
Application of theory and methodology	Has the student provided clear reasons for the choice and use of methodologies and theories?
Correlation between theory and practice	Correct use of theory and problem solution.

Complexity and reflection	Does the project address new problems/theories compared with previous degree programme(s), and does the project include assessments/reflections on these problems?
Conclusion	Does the conclusion provide and answer to the problem statement? Does the project contain a conclusion to the analysis?
Formal requirements	Have formal requirements been complied with? See section 3.
Language	Spelling and formulation form part of the assessment.
Presentation	The presentation must be well prepared and shared between the members of the group, if applicable. The presentation should supplement the written text appropriately and not merely be a summary of the report.

Although you may complete the project as a group, you will be examined individually and will be given individual grades.

The basis of assessment of the final project therefore consists of the following three components:

1. The product (report and application, if any) you submit (see description above)
2. Your own presentation and evaluation of the project
3. The discussion that follows your presentation.

6. Submission

The Bachelor project must be uploaded in Wiseflow by the submission deadline at the latest.

Failure to submit or late submission:

Students who fail to submit the Bachelor project in time are deemed to have failed to sit the exam, and projects submitted after the due date are rejected. The student then has the option of re-sitting the exam based on a new project.

Failure to submit on account of illness:

If the student falls ill within the last 14 days before the submission deadline, the student can obtain an extension upon submission of documentation to the Academy.

Problems with computers, printers or copiers are of no concern to the Academy and do not constitute grounds for an extension of the submission deadline.

7. Grading

The exam certificate contains a single grade for the written exam project and the subsequent oral exam.

8. Orax exam

The duration of the oral exam is approximately 30 minutes.

The exam may take place in accordance with the following model:

You present key issues from the project based on a prepared outline. This may involve expanding on items in the solution and/or a more detailed discussion of other project components. It is important that your presentation includes a critical evaluation of the solution provided in the project.

The detailed discussion can, for example, cover the reason for the choice of data collection methodology, uncertainty factors, choice of strategy and how the company can progress based on the above.

This part of the presentation should take approximately 10 minutes.

The Academy attaches importance to an independent presentation and a good presentation technique.

The supervisor will use the rest of the time to discuss individual components of the project.

The external examiner at the oral examination is the same who assessed the written part of the project.

Oral exams begin early June/January and follow the Academy's examination schedule.

Students who have failed to pass all prior examinations cannot be referred for assessment.

The oral exam is individual, i.e. all students sit individual oral exams.

9. Re-examination

To pass, a student's Bachelor project must be awarded a grade of 02 or more. The following applies to re-exams:

- You have to choose a different topic.
- The Bachelor project must be submitted as agreed with the Academy.
- The date of the oral exam will be determined after submission.

10. Archiving of exam project

The Academy archives one copy of each submitted Bachelor project.

If it is stated on the front page that the project is confidential, only the supervisor and the external examiner will be permitted to read it.

11. Important dates

The submission deadline for the Bachelor project is available on the Academy's calendar on frontier.