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Group-Based Project Examination at the Faculty of Medicine

Guide for students, project supervisors, examiners and co-examiners at the Faculty of Medicine, Aalborg University

April 30, 2013

1. Purpose of this document

Education at Aalborg University is characterized by problem-oriented project work in groups. The aim is that the students acquire knowledge, skills and competences in their subject area and develop the ability to analyze and solve problems in their field. The natural and normal type of exam for project work is one where all the students in the group take the exam together. In the 2007-2011 period, it was not possible to use this type of exam due to an amendment to the Ministerial Order on Examinations in Higher Education (see Ministerial Order No. 231 of 22/03/2006), but is again possible (see Ministerial Order No. 666 of 24/06/2012) and has been implemented for all programs at the Faculty of Medicine.

This document outlines the purpose of the project exam, what must be assessed in the exam, how the project exam must be structured, and what the participating parties must be aware of so that the students are ensured an individual assessment.

The project exam should be viewed as the conclusion to a learning process based on the group having worked collaboratively and achieved the defined learning objectives, throughout an entire semester. Since the conduct of the exam greatly affects the learning process, it is therefore a natural consequence that the students are tested on the learning objectives with an exam format that naturally reflects the working method of the group over the course of the project. The teaching method in project work supports *peer-learning*, i.e., students teach each other as part of their own knowledge acquisition. During the project work the students are expected to continuously discuss content and form, degree of detail and structure, based also on constructive criticism from supervisor(s). Additionally, and to a greater extent than in the



past, the exam situation aims to reflect this teaching method, even though an individual assessment of each student is made in the exam situation.

When the project exam is conducted as a group exam, it gives students the opportunity to form an impression of the performance needed to achieve a given assessment (grade), since each student can observe how other students perform during the exam. In addition, it is possible for each student to observe exam skills in the other students, which can benefit the student in later exams.

This exam format also ensures transparency in terms of the influence of the assessors on the exam results of individual students.

For the overall faculty rules on the project exam, please refer to the Examination Policies and Procedures for the Faculty of Engineering and Science, the Faculty of Medicine, and the Technical Faculty of IT and Design: <http://www.medicine.aau.dk/Education/Education+and+Programmes/>

2. Project exam and learning objectives

The project exam tests the extent to which the learning objectives stated in the curriculum for the project module have been achieved. The precise formulation of these learning objectives depends on the specific project module. Typically, these are the types of learning objectives in project work:

Competences such that the student can analyze an issue, develop a problem statement, devise a solution method within the project theme, and independently reflect on and adjust the solution method based on the conclusions reached in the project.

Skills such that the student can apply the methods and techniques from the subject area in order to solve the problem formulated and document this in speaking and in writing.

Knowledge such that the student can account for theories from the subject area in connection with analyzing and solving the project problems, including why these particular theories were selected.

During the project exam, the examiner will pose questions to all students in order to clarify the extent to which each student meets the specific learning objectives of the project module.

3. Structure of the project exam

The project exam is based on the written project report (or the equivalent, as indicated in the curriculum) which is forwarded to the assessors prior to the project exam.



The project exam takes the form of a seminar with the examiner (usually the main supervisor) as the moderator. It consists of two elements – the presentation and the examination itself – and all students as well as the examiner(s) and any co-examiner(s) participate during both elements.

- The project exam begins with an overall presentation of the project work where each student presents one or more key points from the content of the project work or puts them in perspective. The presentation is jointly organized by the group and must appear as a single whole, but the responsibility for the individual points falls to the individual student. Students may be asked questions during the presentation. It is recommended that questions during the presentation be primarily of a clarifying nature.
- The presentation is followed by the second part of the examination which tests the students on the project module's learning objectives. The group is questioned as a whole on the analysis of the problem, problem statement, strengths and limitations of the methods selected, putting things in perspective and the like. Questions are posed to the entire group, and the assessors note which members of the group contribute answers (and which do not), and how satisfactory the answers are. If each student does not actively participate by volunteering answers then there will be direct inquiry into the student's knowledge, skills and competences. There is also the possibility that individual students relate to each other's contributions so that the exam also gives rise to substantive discussion.

The examiners alternate between questions to the group as a whole (where all students can contribute) and questions where each student is questioned individually at a detailed level to determine the student's knowledge and skills. This is thus an "excavation of knowledge" for the individual student. What is being examined here is how well each student meets the specific learning objectives.

Before the exam, the examiner must prepare several different questions for all the students in relation to the module's learning objectives so that all the students are sufficiently questioned in order for the assessors to be able to arrive at a reliable and fair assessment of each student's academic level in relation to the learning objectives.

What is being examined for each student is how they answer and the extent to which they take part in the discussion. Each student will be assessed on the extent to which they can actively account for the analysis of the problem, problem statement, choice of method and reasons for the choices made in the formulation and solution of the problem. Each student will also be assessed on how they can discuss and further elaborate on the issues in the project.

For projects of 15 ECTS credits and over, for the entire exam process (including breaks, deliberation and giving grades), 45 minutes per student up to a maximum of 5 hours in total is allocated. For projects of less than 15 ECTS credits, however, 35 minutes per student up to a maximum of four hours in total is allocated. With exams for final project modules (Bachelor's / Master's project), 60 minutes per student is allocated.



4. Implementing the structure

1. The project exam begins with the examiner introducing the other assessors for the students.
2. The project group members present the project work within a defined period of time based on their current knowledge and so that all the students contribute equally in the presentation. For the presentation, typically 6-10 minutes per student is allocated out of the total exam time available. The duration is agreed on with supervisor before the exam. The students are expected to have prepared their presentation before the start of the exam and prepared the exam room and connected any electronic devices.
3. Break during which the assessors agree on and plan the examination method and prioritize questions and their order (typically 5-20 min).
4. After the break, the examiner begins by explaining how the remainder of the exam is expected to proceed. The examiner has prepared enough questions before the exam to cover the learning objectives with all students in the group. The other assessors take notes and pose optional follow-up questions with the goal of being able to evaluate the academic level of a student answer.

Before the exam, it is useful for the students to prepare for the exam by reviewing the material submitted and identifying potential questions and discussing possible answers.

5. When the examiner has asked a question, the students may volunteer to answer the question. The examiner controls who is allowed to respond. The examiner may choose to allow several students to answer the same questions and/or related questions.
The students are expected to indicate that they would like to answer – even if another student has been asked to respond. If a student persists with such an indication after a fellow student's response, it is because the student can provide more detail or supplementary information.
6. The examiner controls the time and designates breaks. The examiner also controls, after consulting with the other assessors, when to change themes and how many students may be allowed to answer a question. In the breaks, the examiner and other assessors clarify whether there are some questions or some students that must be prioritized after the break in order to be able to assess the students' individual academic levels with regard to the learning objectives. The students must be aware that targeted questions are aimed at clarifying the student's individual level and can therefore be very *easy* as well as very *difficult* questions.
7. When the examiner and other assessors have reached a basis for being able to assess the students individually, the exam is ended. This basis must be reached within the time frame. If the basis is reached earlier, the exam can be ended before the end of the time frame. In this context, it is important to emphasize that the examiner must have prepared differentiated questions that can be used with different students in order to determine their individual level within the time frame.



The students are expected to respond as accurately and comprehensively as possible to all questions posed, thus providing the examiner and assessors (co-examiners) as good an assessment basis as possible. Therefore, students are generally advised not to "save" answers for a later time in the exam.

8. The examiner and other assessors deliberate, and the exam results are communicated to students as agreed (see exam rules). The students are expected to have agreed at the latest on the exam day as to how they want the exam results communicated (see exam rules).
9. The examiner and other assessors end the exam by giving the project group give feedback on their exam performance and answer any questions.
The students have the opportunity to prepare questions for the examiner and co-examiner during the break where the examiner and co-examiner deliberate. The deliberation, communication of the exam results as well as feedback/questions on the exam must take place within the time frame allocated for the exam. It is important to be aware of this in the planning/management of the exam.

The examiner is free to decide how to manage the exam and what questions are posed. For example, the exam can be organized in themes such as background, method, results and discussion or problem statement, analysis methods, analysis results, solution methods, validity and functionality of the solution, generalizability and the like. Others will choose to go through the report from beginning to end. In this context, it is essential that the project module learning objectives are examined and that the students are familiar with the examiner's choice of method. The examiner has a duty to inform the students about the choice of method in status seminars and/or supervisor meetings during the project period.

5. Role of the examiner and co-examiner

The normal duty to take notes in the exam also applies to the group-based project exam. As with any other exam assessment is individual. It is therefore extremely important that each assessor makes sure to note the level of the individual student, i.e., the extent to which and to which questions each student contributes to the answers as well as the quality of their answers. The assessors must ensure that all students take part so that individual assessments can be made. The assessors may therefore decide, based on the discussion, that some questions be directed to only a part of the students.



6. Basis for assessment

Each student is assessed on the basis of an *overall evaluation* of the fulfillment of the project module's learning objectives as reflected in

- the project report submitted (or the equivalent, as indicated in the curriculum)
- the individual student's performance in the presentation
- the individual student's performance during the actual exam

Partial grades are not given, not even "unofficial" ones, for each of the three elements.

7. End of the project exam

Once the assessment has been made, each individual student is told their grade as well as a justification for the grade. The student has the right to be told their grade in private.

The assessors then provide overall feedback on the project report, the presentation and any other aspects of the exam process to the entire project group.