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Minor project assessment handbook

Process Optimization

Industrial Strategies & Change Management

Supply Chain Engineering

Operational Management in Industry

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1 Introduction

This handbook project assessment for minors contains information on the two days a week project. It is used for the following minors:

- Proces Optimization
- Industrial Strategies & Change Management
- Supply Chain Engineering
- Operational Management in Industry

This document informs you about the underlying competencies for the assessment of the minor project, about the manner of supervision and about the various documents you will produce during the project. This handbook also contains information about the defence presentation and assessment of your project.

2 Competencies

The exit levels for all the study programmes within Engineering & Design are stipulated in the Bachelor profile. This profile comprises eight sector competencies:

1. *Analyse*: Ascertaining the client's question and translating this into requirements, objectives and prerequisites.
2. *Design*: Creating an engineering design (for a product, process or service).
3. *Execute*: Producing a product or providing a service or implementing a process.
4. *Monitor & Control*: Optimising the performance of a product, service or process.
5. *Manage*: Structuring and managing organisational processes.
6. *Advise*: Providing well-founded advice on designing, improving or applying products, processes and methods.
7. *Research*: Applying appropriate methodologies and techniques in conducting applied research.
8. *Develop Professionally*: Mastering and further developing the skills necessary to effectively execute the engineering competencies.

For more extensive information on these competencies refer to: Bachelor of Engineering, a competency-based profile description (www.hbo-engineering.nl) (Dutch-language website).

These competencies are described for various attainment levels. The level is determined by the complexity of the assignment, the complexity of the working situation and the level of supervision.

Table 1 gives an overview of the different levels.

Level 1	<ul style="list-style-type: none"> • Conducting a simple and structured task using a familiar method • In a predictable, single-discipline context • With intensive coaching
Level 2	<ul style="list-style-type: none"> • A complex, but structured task using familiar methods • In a complex, single-discipline context • With requested coaching from experts in the field
Level 3	<ul style="list-style-type: none"> • A complex, unstructured task applying self-chosen methods • In a complex, multi-disciplinary context • Independently executed

Table 1: Attainment outcomes for the three levels

The Bachelor profile has been determined by indicating the attainment level for each competency. Figure 1 shows the assessment profile for the minor project.

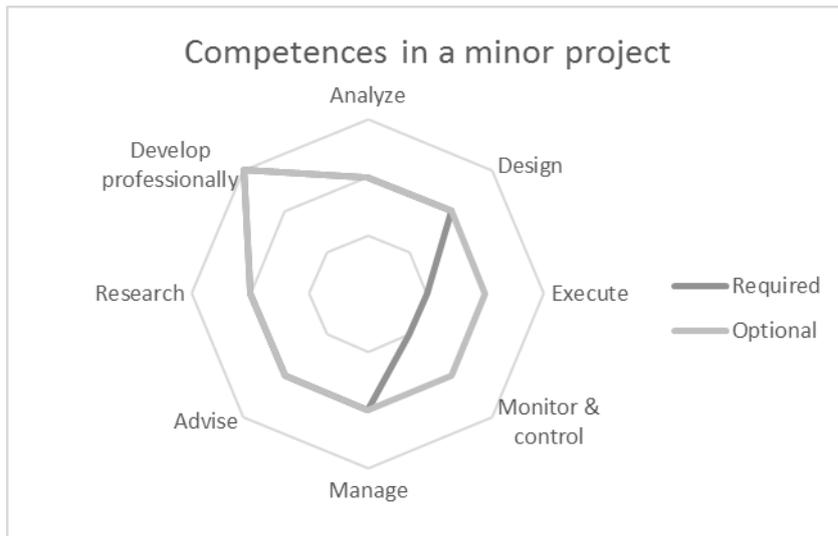


Figure 1: Bachelor profile for a minor project

Students must attain on all competences on the required level to be successful. The group can choose to go the extra mile through enhancing their attainment on the competences Execute and Monitor & control. When you do so: the coaching remains the same, only the assignment gets more complicated on those competences and the context becomes more complex.

The group must announce their requested assessment level in the preliminary research document. Students are assessed during the project to determine whether they have achieved the attainment level for the competencies.

3 Supervision

The projects are supervised by one lecturer. The supervisor acts as coach and assessor. The supervisor determines the mark for the project.

The supervision takes place during coaching sessions which are scheduled in for each project group. The coaching sessions are compulsory for the groups and students are expected to actively participate. The following table lists the planning for the project.

Week	What	Who	Purpose/Explanation
B (04/02)	Kick-off	Coach group + Windesheim supervisor	Explain working method
C (Dutch Excursion week)			No lessons but you can work at company
D - Holiday			Hand in Preliminary Research Windesheim supervisor checks with company
E (25/02)	Progress meeting at university	Coach group + Windesheim supervisor	Approval Preliminary Research
F			
G			
H			
I (25/03)	Progress meeting at university	Coach group + Windesheim supervisor	Interim evaluation on project and team feedback
J			
K			
L			
M (22/04)	Progress meeting at university	Coach group + Windesheim supervisor	Last meeting before handing in report
N - Holiday			
O			
P			
Q			
R – Ascension Day (Thursday, Friday off)			Hand in final report (including individual reflection and feedback from company supervisor)
S	Presentation defence company	+ in company supervisor	Coach group + Windesheim supervisor + company supervisor

Table 2: Contact moments during the project phase

4 Executing project

This section describes the execution of the project based on a number of key milestones, i.e. the approval of the preliminary research, the approval of the intermediate report, the submission of the project report, reflection report and the defence presentation.

	Preliminary research	Final Project Report	Presentation	Defence	Reflection Report
Analyse	X	X			
Design		X	X	X	
Execute		X	X	X	
Monitor & Control		X	X	X	
Manage	X				X
Advise		X	X		
Research	X	X			
Develop Professionally				X	X

Table 3: Relationship between project components and competencies for the final mark

4.1 Approval of Preliminary Research

You do preliminary research to get an idea of the problem at hand and know the context in which it takes place. Please you use the format for preliminary research available on ELO.

4.2 Approval of Intermediate Report

In the intermediate report the coach group outlines how the progress project is going. The intermediate report should, therefore, include the following elements:

- Description of the process: How is the progress of the assignment? You articulate the progress in terms of the assignment.
- Analysis: How is the progress evolving? Are you still on track? Why?
- Team-cohesion: Articulate the team cohesion. How are the team roles playing out?

The intermediate report is approved by the Windesheim supervisor in consultation with the company supervisor.

4.3 Approval of Project report and Reflection report

This part contains an overview of the compulsory elements of the project report and detailed information about the project report and the reflection report.

4.3.1 Project report

The assessment of the project report is taken into account when assessing whether the student has achieved the attainment level for the competencies. This is why students are required to report both on the preliminary research and the results of the project. After describing the context of the project, students outline the assignment and substantiate the approach. The report, therefore, contains a description of the way the problem has been investigated and the key findings. Students also show how the results led to the design, the execution, or the monitoring and control of a new product or process. Students must adequately substantiate both the content and process by, for example, referring to relevant information sources and by applying theory and models. The report concludes

with the student's conclusions and recommendations relating to the assignment. Students can also supplement these with additional general conclusions, recommendations and suggestions for possible future research. The project report should contain the bibliography of all used written resources. The preliminary report is included in the project report as an appendix.

4.3.2 Reflection report

The assessment of the reflection report is taken into account when determining whether the student has achieved the attainment level for the competencies. For this reason, in this report students reflect on their professional development and how they managed the project phase. The reflection report contains identifiable parts for each and every student participating in the project.

Personal Professional Development

In this section on personal professional development, the student outlines the required theory and know-how applied to successfully complete the project and how the student actually developed this knowledge in the course of the project. In addition, the student presents the feedback he/she received during the course of the project (based on the interim feedback and final feedback by the company supervisor and feedback received during the coaching sessions) and how the student processed and applied this feedback during the project. The student also outlines the way in which he/she gave feedback during the project and the effect of this feedback. Finally, in this part of the report the student discusses the professional and ethical issues that were taken into consideration during the execution of the final project.

Projectmanagement of Project

In this section on the management of the project the student indicates how well he/she managed the project in relation to the planning, but also in the area of galvanising support and involving stakeholders.

In relation to both of the above aspects, students are required to zoom in on a concrete situation and to analyse this using an approved reflection method. Students can choose their own reflection method. A suitable reflection model is Korthagen's ALACT Reflection Model, which is outlined below (see Figure 2). The student, therefore, analyses two concrete situations: one related to the student's own personal professional development, the other in the area of project management.

Phase 1: Action (=phase 5 of previous cycle)

- What did I want to achieve?
- What did I want to focus on?
- What did I want to try?

Phase 2: Looking back on the action

- What was the context (what happened exactly)?
- What did I want?
- What did I do?
- What did I think?
- How did I feel?

Phase 3: Awareness of essential aspects

- How do the answers to the above questions relate to each other?
- How did the context influence this as a whole?
- What does this mean for me now?
- What is, therefore, the problem (or the positive discovery)?

Phase 4: Creating alternative methods of action

- What alternatives do I see?
- What advantages and disadvantages do these have?
- What do I carry over to the next time?

Figure 2: Korthagen's ALACT Reflection Model

Students are strongly advised to study the competencies and the related behaviour descriptors at the outset of the project phase and to determine points for personal professional development. This will make it easier to monitor the personal development process by requesting appropriate feedback and by personal reflection at the end of the project.

4.4 Project presentation and defence

The project presentation and defence consists of an oral presentation on the project of a maximum of 25 minutes. This presentation takes place at the company with at least all students and the company mentor participating. At the start of the presentation, the student provides a hand-out of the presentation slides. During the defence presentation, the student focuses on the problem definition, the results, the conclusions and the recommendations. Time is then allocated to all participants, i.e. the company mentor and university assessor to ask questions about the final project. The final project defence meeting takes a maximum of one hour and the final mark is determined. After the markers' deliberations, the student is given the final mark with a breakdown of the marks for the individual components of the final project. If all the component marks are 5.5 or higher, the final project has been completed successfully.

4.5 Mark

The final mark is an average of the eight competences marks. The assessment of these competencies is based on the various individual components of the project, i.e. the preliminary report, the final project report, the presentation, the defence and the reflection report. The feedback from the company supervisor will be taken into account. The student must achieve 5.5 or higher for each competency, which together constitutes the mark for the minor project.