



ASSESSMENT RUBRICS
DEPARTMENT OF INDUSTRIAL DESIGN

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GENERAL INTRODUCTION

DEVELOPMENT HISTORY

After the introduction of draft rubrics during the education day of 2015-2016 the editors have worked together with many colleagues to create rubrics for the expertise areas (5+DRP) and the examinations at the end of the first year; third year bachelor and second year master. Advice was received from the core-chairs on the rubrics for the third-year bachelor and the second-year master. Furthermore, the Examination Committee provided advice. For 2016- 2017, the Examination Committee and Program Committee have been consulted before the first semester. Their advice was processed in version 1.0. and implemented in the first semester of the academic year 2016-2017. The editors have evaluated the rubrics after semester A of academic year 2016-2017. For this purpose, the student year councils were consulted, Associate Professors of our department were interviewed, and comments, feedback and tips of engaged students and staff-members were processed. Furthermore, both the Program Committee and the Examination Committee provided elaborate feedback.

After thorough consideration of all the feedback it was decided to take a two-step approach in continuously improving the rubrics. Firstly, It was decided to take the time to prepare content related changes and to implement these changes in rubrics version 2.0 carefully. In the meantime, improvements were also made and published on the online education guide for the short term, A summary of the improvements is given below.

For the second semester of academic year 2016-2017, we wrote elaborate instructions for the whole competence assessment procedure including the usage of the rubrics. Furthermore, it was decided to provide templates for the pre-master, project-3 of the Bachelor and project-2 in the Master. Cooperating for FBP and FMP is changed from a group perspective to an individual perspective including working with third parties. Finally, we have reduced the diversity in deliverables we ask for to 1) facilitate communication processes; 2) enhance clarity about the assessment deliverables, and 3) better align with the current practice of the squads. These changes were implemented in **version 1.2** of the rubrics.

For the second semester of academic year 2017-2018 the project-1 rubrics are revised. Furthermore, cell descriptions that linked to other cells in the project rubrics are removed and rewritten without affecting the meaning of the cell. These changes were implemented in **version 1.3** of the rubrics.

For the first semester of academic year 2018 - 2019 the general introduction has been updated with changes in the procedure for the FMP assessment with three examiners replacing the procedure with an FMP panel of two examiners + a plenary session. Finally, the verdicts for administration 'P+E' and 'C+H' have been replaced by 'E' and 'C' without affecting the meaning of the verdicts. These changes were implemented in **version 1.4** of the rubrics.

In the first semester of academic year 2019-2020, **version 1.5** was introduced. The standards were mirrored, so the content of the rubrics appears similar in the booklet as on Canvas. In this version the bachelor internship rubrics was added, as well as rubrics for the FMP Proposal and M21 Option. The latter two apply to master students that started in September 2018 or later. Furthermore, the FMP assessment instructions were adapted to the new FMP procedure in place. The FMP procedure can be downloaded from our [online education guide](#).

In the first semester of the academic year 2020-2021, **version 1.6** was introduced. In this version, the criteria Professional Identity and Vision were added to the Rubrics of Bachelor Project 2, Bachelor Project 3, Master Project 1 and Master Project 2. Also, the criterium Professionalization Activities was added to the Bachelor Rubrics, to incorporate the Career Points. The FMP Proposal and M21 Project Rubrics were adjusted. Furthermore, in this version the roles of the FBP examiners have been clarified. The first examiner is (now) the teacher/project coach while the second examiner role is fulfilled by a different staff member. Finally, it has been clarified in the rubrics that Professional Identity and Vision and Individual Competence of Design are of equal importance as Overall Competence of Designing and Professional Skills.

In the second semester of the academic year 2020-2021, **version 1.7** is introduced. The group and individual parts are made more explicit in the layout of the booklet.

Before academic year 2021-2022 **version 1.8** was introduced. The lacking criteria for Scientific and Professional Skills were added to all Master Project rubrics. Also, the rubrics for the Preparation FMP were added and the rubrics were made gender neutral.

For academic year 2022-2023 **version 1.9** is introduced. The rubrics were not changed. Changes in deliverables (leaving the squad presentation as an option) have been added. For the academic year 2023-2024 **version 2.0** was published, wherein the updated FBP rubrics are included after piloting them in Semester B of 2022-2023 and new rubrics for the first year Bachelor College re-design project and learning line were added. In **version 2.1** the rubrics for the new CBL Project 2 were added.

In **version 2.2** all project rubrics were updated to include a reference to ethical conduct. The CBL-Project 1, DLB384, DLB385 were updated and added based on the continuous development and evaluation of the curriculum. For master project 2 a standard in overall competence of design has been changed, including the phrasing of the Preparation FMP and FMP Proposal rubrics. The updated FMP rubrics are included after testing them during the summer period of 2023-2024.

In **version 2.3** the project rubrics for CLB-Project 2 are updated.

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CONTENT OF THE DOCUMENT

Following the advice of the Program Committee and requests of numerous students and staff members we wrote one manual for rubrics and the Competence Assessments. The Competence Assessment is an investigation into the student's academic and professional competence development. The Competence Assessment results in a verdict and is based on oral, written, digital and/ or physical information and evidence. In this guide, we inform you about deliverables for the projects, explicate what you need to do, outline the steps of the assessment procedure, and provide rubrics that can be used. We present both the rubrics for the competence assessments split per project and the expertise areas and would like to instruct you on how to use the rubrics for the competence assessments. The booklet is written for examiners but is informative for other staff members /students.

END-TERMS: GENERIC DIFFERENCES BETWEEN BACHELOR AND MASTER

The differences in levels (descriptions) between our Bachelor and Master students reflect the end-terms of graduate students as defined by Dublin Descriptors and the AQUA framework for Bachelor and Master Students (Meijers, Overbeek, Perrenet, et al. (2005)). The differences in levels between Ba and Ma students, as operationalized in the rubrics, can be summarized as follows:

TABLE 1 DIFFERENCE IN LEVELS BETWEEN BACHELOR AND MASTER STUDENTS, AS OPERATIONALIZED IN THE RUBRICS

BACHELOR	MASTER
Can apply knowledge in various familiar situations	Can apply knowledge in new situations
Can work under supervision; average level of autonomy	Can work independently; high level of autonomy
Can approach/tackle and solve (relatively) basic (design) problems/questions	Can approach/tackle and solve (more) complex (design) problems
Can develop knowledge and skills/competences from related disciplines	Can develop knowledge and skills/competences from various disciplines
Can integrate and apply knowledge and skills/ competences in relatively basic (design)	Can integrate and apply knowledge and skills/competences in more complex (design) problems
Can participate in the design and/or research process	Can adjust the design and/or research process to meet the demands of the task at hand
Has sufficient knowledge of the disciplines to judge the relevance of new developments, and can	Has sufficient deep - seated knowledge of the disciplines to be able to form a (scientific) judgment, and
Can use scientific research findings in the design process and can perform a simple research project	Can plan and perform scientific research and can reflect on the phases of the research process
Can communicate opinions, ideas, information and results clearly	Can communicate conclusions, including the underlying knowledge, motives and deliberations, clearly, convincingly (and unambiguously)

GENERAL INSTRUCTIONS ABOUT THE ASSESSMENTS

Table 2 provides a summary of the steps in the competency assessment procedure. Consequently, the different steps of the procedure are briefly explained. Additional details can be found through the links to the online study guide.

CREATE, COMMUNICATE AND EXPLAIN RUBRICS

In this booklet we present rubrics for the competence assessments split per project and the expertise areas. Rubrics are a tool to describe in words where we assess our students on and what we expect of them in terms of levels of performance. In the project and expertise area rubrics we use the following terms:

- The term **sub-criterion** is used to address what is assessed.
- The term **criterion** refers to a cluster of sub-criteria.
- The term **standard** is used to indicate a description of the performance/development level of the student.
- The term **rubrics** is used to describe the **combination of criteria, sub-criteria and standards**.

Rubrics are useful because they assure that all our staff members address the same issues and assess the students based on the same content. Furthermore, rubrics help in making clear to students what is expected of them and provide our teachers with a means to assess student work more efficiently. It is important that rubrics are viewed as a tool and are used as such. Rubrics always need to be translated to the specific context of the squad, the projects of the students and their individual learning processes. Consequently, rubrics can never entirely capture the individual nature of projects.

- For the competence assessments of the examination projects (bachelor project-1; final bachelor project and final master project) the criteria, sub-criteria and the level descriptions for each criterion are fixed. The competence assessment of the final bachelor project is on the development over the total bachelor program. The competence assessment of the final master project is on the development over the total master program.
- For the other competence assessments, the criteria are fixed and the fixed sub-criteria for each criterion are provided. Additional sub-criteria may be added to the criterias and level descriptions of each sub-criterion can be adjusted or changed.

TABLE 2 STEPS IN COMPETENCE ASSESSMENT PROCEDURE

STEP	GOALS	MOMENT	RESULT
1. Mid-Term	Formative assessment	Half-way the semester (to be determined by squad leader)	Verbal feedback
2. Demo Day	Formative assessment		Verbal feedback
3. Assessment	Summative assessment		Written/verbal feedback
Presentations and durations:			
<ul style="list-style-type: none"> • Internship 30 minutes • FMP Proposal: 30 minutes • Preparation FMP (max) 50 minutes • FMP 90 minutes • FBP 75 minutes 			
4. Determining the verdict/grade		After deliverables are handed in	Tentatively filled out rubrics (Note: do not communicate verdict or grade.)
5. Confirming the verdict/grade		<ul style="list-style-type: none"> • Internship after oral exam • Projects (including Pre-Master and FMP Proposal) after deliverables are handed in • FPB at plenary graduation meeting; FMP during deliberation Graduation Committee 	Completing rubrics and verdict/grade
6. Communicating the verdict/grade			Verdict E / P / C / H or grade An E verdict is not possible for FMP Proposal
7. Recording of grade/verdict			Result list to CSA-ID for recording in Osiris
8. Right of inspection		20 working days after communicating the verdict	
9. Retake (if applicable)	Summative assessment	Within 3 weeks after communicating the verdict	Verdict P or H or grade

STEPS IN THE COMPETENCE ASSESSMENT

Midterm

The midterm is the first opportunity for students to present their process and deliverables. Squad leaders are responsible for organizing the midterm and decide upon the structure, what students should present, how they present it and when. The midterm is intended as a moment for formative assessment and results in oral feedback to the student.

Demo Day

The Demo Day is the second opportunity for students to present their process and deliverables. All students show their work (demonstrator) to coaches, stakeholders and clients, (scientific) staff members, and other students in an exhibition-like setting. Students pitch their project and present their demonstrator (or at least an experiential outcome of the project) to demonstrate how they have integrated different expertise areas. Students can support their exhibition with additional materials such as posters and videos, which can consequently be submitted for participation in awards (e.g. iF or IxDA) or exhibitions (Design United/Drivers of Change). The pitch (maximum 2-minutes) and the deliverables are formative assessed by at least one of the examiners. If applicable, students should process the feedback given by the examiner in the final deliverables handed in before the oral exam. Consequently, the Demo Day is the second instance for formative assessment and results in oral feedback to the student.

Final Deliverables

Before the final presentation, and in order to perform the Competence Assessment, the following deliverables are required:

- A demonstrator (as presented on the Demo Day);
- A written report or (short) paper describing the design and/or design research process (Table 3 provides an overview of the type of reports per project) to be delivered; further information can be found on the bachelor project and master project pages of the Online Education Guide.
- For the Professional and Personal Development (PIV) Learning Line, final bachelor project and final master project a portfolio is required, including a professional identity, vision and a reflection on the overall competence of designing and the (planned) development in relation to the expertise areas supported by evidence from learning activities, both curricular and extra-curricular. For the competence assessment of the pre-master project a portfolio can be requested when the examiners have doubts about the development of the student.

What can we assess with each deliverable?

Through the **demonstrator** students demonstrate their Overall Competence of Design and their capability of integrating expertise areas. Through the **report** students demonstrate their design and research process as well as the professional skills reporting and dealing with scientific information. The **reflection** (may include images) contributes to the assessment of the students' competence development, professional identity and vision development and ability to reflect. However, depending on the goal of the reflection it can be used to assess other criteria/sub-criteria as well. For example, the Overall Competence of Design can be assessed when students explicate and motivate important decisions in their design process. In group projects students, for example, can reflect on their competencies with respect to teamwork and communication. In their reflection students should include how they have integrated knowledge and skills in their projects and how (external) learning activities contributed to their competence development.

TABLE 3 OVERVIEW OF REPORTS PER TYPE OF PROJECT

ASSESSMENT	TYPE OF REPORT	AUTHORS
CBL-Project 1	Design Report	Group
	Reflection	Individual
CBL-Project 2	Design Report	Group
	Reflection	Individual
CBL-Project 3	Design (Research) Report	Group
	Reflection	Individual
Professional & Personal Development (PI&V) L.L. 1	Portfolio	Individual
	Portfolio	Individual
Bachelor Project 2 Design (BP2) <i>Phasing out</i>	Design (Research) Report	Group
	Reflection	Individual
Bachelor Project 3 Design Research (BP3) <i>Phasing out</i>	Design (Research) Report	Group
	Reflection	Individual
Internship	Internship Report + Reflection	Individual
Exchange	Grading by hosting university	Individual
Final Bachelor Project (FBP)	Report (<i>and Portfolio</i>)	Individual
Pre-master project	Report	Group
	Reflection	Individual
Master Project 1 Design	Report	Group
	Reflection	Individual
Master Project 2 Design Research	Design (Research) Report + Reflection	Individual
	Design (Research) Report + Reflection	Individual
FMP Proposal	FMP Proposal and Planning	Individual
Preparation FMP	(Interim) report of activities, FMP Proposal and Planning, Reflection on Competence and PI&V development	Individual
	(Interim) report of activities, FMP Proposal and Planning, Reflection on Competence and PI&V development	Individual
Final Master Project (FMP)	Report (<i>and Portfolio</i>)	Individual

The **presentation** is meant to provide insight into the student's contribution to the project (in the case of a team effort) and their personal reflection on their competence development, using evidence from expertise areas they integrated into their design, how and to what extent. Furthermore, the professional skill presenting is demonstrated. Students should also indicate how external learning activities contributed to their competence development. Through the **oral exam**, examiners can clarify aspects that were unclear from the different deliverables, or they can use the oral exam to challenge the student to demonstrate excellence. The whole of the deliverables contributes to the student's ability to organize their learning and plan their activities. Finally, in the case of examinations for bachelor project 1, final bachelor and final master project, the **portfolio** is used to assess the student's professional identity, vision and overall competence of designing as developed during the first year, whole bachelor, or whole master program.

Presentation and Oral Exam

Presentations/oral exams are expected at the end of an internship, FBP, Preparation FMP, M21 Option (project), FMP Proposal and FMP. In order to conduct the competence assessment both examiners are expected to be acquainted with the content of the report (and/or portfolio). *In case of the FMP: the independent examiner is acquainted with the content of the portfolio, the graduation mentor is acquainted with both the portfolio and report, the expert (examiner) is acquainted with the content of the report. Examiners are allowed to deviate from this division.*

The first part of the final assessment is a presentation. The content of the presentation should be based on the outcomes of the project. If required by the examiners, the demonstrator should be brought to the presentation. During the presentation of a final bachelor project (FBP) and final master project (FMP) the student should also present a portfolio. As the oral exam takes place the examiners ask questions about the project and/or the development of the student. The oral exam is a summative assessment and results in a verdict for regular projects. For the FBP, the final grade will be discussed in a plenary session; either in their totality or for a repository of high and low grades to assure consistency of quality over multiple years. For the FMP, the final grade is decided upon during the deliberation of the graduation committee consisting of the three examiners. The result is communicated afterwards through Osiris.

Scoring rules

Although student work might differ per project, we use similar guidelines and scoring rules for rubrics of all projects. The rubrics are not the norm but a guideline. The assessor does not need to execute the steps in the described order.

- Pick the cells that are most applicable for each sub-criterion
- Consider the text in the cells as arguments and decide which arguments are the most applicable
- Reach an insufficient, sufficient, good or excellent level for each criterium
- Students need to be assessed as sufficient on each criterium in order to pass
- Students can score insufficient in some sub-criteria, as long as the overall criterium is scored sufficient (compensation from sub-criterium).
- As a condition for participating in a retake the sub-criterium Design and Research Processes needs to be scored as sufficient.

Composing and Communicating the Rubric

Except from the final examination moments, sub-criteria can be added to the criterium. Furthermore, the descriptions belonging to the combination of criterium, sub-criterium and standard can be altered, as long as the provided description matches with the expected level. Consequently, the examiners need to inform the students about this change and what they will assess at the beginning of the semester.

Completing the Rubric

One examiner completes the rubrics based on the results of the investigation and evaluation of the demonstrator, report, presentation, portfolio (if applicable) and oral exam for each individual student or each group.

Determining the Verdict or Grade

The verdict or grade is not automatically generated by the sum of the selected standards. The results of a Competence Assessment are expressed in one of the following verdicts:

- **Promotion with excellence (P+E):** the student is promoted with excellence and receives the assigned credits;
- **Promotion (P):** the student is promoted and receives the assigned credits;
- **Conditional pass (P+C):** the student is not promoted unless conditions are sufficiently met within a maximum of three weeks (some sub-criteria are assessed as insufficient);
- **Hold (H):** the student is not promoted;
- **No Show (NV):** the student has not shown up or did not hand in the deliverables on time.

The results of Final Bachelor and Final Master project are expressed in a grade rounded to the nearest half grade on a scale of 1- 10.

Confirming the Verdict or Grade

For non-exam moments and regular projects, the verdict is confirmed after all exams have taken place to enable comparison between the assessed students.

For the FBP, the final grade will be discussed in a plenary session; either in their totality or for a repository of high and low grades to assure consistency of quality over multiple years. During the meeting examiners deliberate on the grades and should achieve consensus on their distribution. For the final master project, the grade is determined during the deliberation between the three examiners at the FMP graduation session.

Communicating the Verdict or Grade

The coach/mentor communicates the rubrics to the student within five working days after the last examination activity. The coach/mentor do not communicate the verdict/grade with the rubric. If the coach/mentor is unable to communicate the rubrics in time an email should be sent to the student to inform about the delay. The email should include a term within which the assessment conclusions and rubrics will be communicated. The Examination Committee (Examination.Committee.ID@tue.nl) should receive a carbon copy (cc.) of the email.

Recording the Verdict or Grade

For projects outside the squads, the coach/mentor delivers the result lists to CSA-ID, where they will record the verdict/grade in the TU/e education information system (Osiris). For projects within the squads, the squad leader delivers the result lists to CSA-ID. After the verdicts/grades are recorded, students and can view them in Osiris.

Right of Inspection

Students have the right of inspection and should be notified of this right by their examiner. Consequently, students can request a meeting with the examiner to clarify the arguments for the verdict. If the student has an objection against the verdict, they can submit an appeal to the CBE (College van Beroep voor Hoger Onderwijs).

Retake

When the verdict is a P+C, the student is entitled to do a retake.

Note: This is only possible if the student has received a sufficient for the sub-criterion Design and Research Process. The first examiner advises on the feasibility of doing a retake after consulting with the second examiner. If the student accepts the retake, the examiner should clearly describe the conditions for receiving a P. The retake result has a time-limit of three weeks after the verdict or grade is recorded in Osiris.

Role of the Examiners: *Projects (Except Final Master Project)*

In these Competence Assessments, two examiners are involved. The first examiner carries the main responsibility for the judgment and the quality of (preparing, performing and finalizing) the assessment. The second examiner is there to assure that a fair and sound verdict is reached. The second examiner acts as a critical friend.

Examiners: *Final Bachelor Project*

In the Competence Assessment of the final bachelor project, two examiners are involved.

- The first examiner is the project/teacher coach.
- The second examiner is another staff member.

Examiners: *Final Master Project*

In the Competence Assessment of the final master project, three examiners are involved.

- The independent examiner is the chair of the graduation committee, this examiner provides complementary expertise to that of the other examiners and safeguards that the FMP procedure is followed. The independent examiner will read the portfolio.
- The graduation mentor of the student will complete the rubrics with approval of the independent examiner. They will read both the report and portfolio. At least one of the other examiners are not part of the same research group as the graduation mentor. The mentor publishes the feedback on Canvas and the distributes the grades to CSA-ID.
- The expert examiner completes the graduation committee. This examiner is an expert in one or more expertise areas that are relevant for the student's project but can provide any input that this examiner deems relevant. The expert examiner will read the report.

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - GROUP

Registration code: DPB110 CBL-Project 1

All group members are responsible for the content of the group report.

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas	Can demonstrate how knowledge, skills and attitudes from two EAs (CA, US) or more were applied during the process. Evidence demonstrates how the integration of EAs contributed to a convincing final design, beyond 'Good' level.	Can demonstrate how knowledge, skills and attitudes from two EAs (CA, US) were applied during the process. Can demonstrate how the integration of EAs contributed to the final design.	Can sufficiently demonstrate how knowledge, skills and attitudes from two EAs were applied (CA, US) during the process. Can argue how each expertise area separately contributed to the final design, but integration between the EAs is not strong.	Can not sufficiently demonstrate how knowledge, skills and attitudes from two EAs were applied during the process and/or cannot convincingly argue how more than two areas contributed to the final design.	Report
	Design and Research Processes	Demonstrates control over an iterative design process. Widening and deepening steps can be identified; shows understanding of context and methodology. The design process has led to a convincing final design.	Has conducted an iterative design process in which widening and deepening steps can be identified, and can motivate how process activities and design decisions have led to an improved design	Has conducted a sufficiently structured design process. Iterations are not strong, but the group is able to describe relations between design decisions and process activities.	Is unable to describe the conducted design process and/or cannot, or insufficiently, argue for the conducted design process.	Report
	Demonstrator	Develops an integrated prototype of the designed concept, beyond 'Good', which shows careful attention to detail.	Can prototype a design that provides a good experience. Clear attention to aesthetics and details.	Can prototype a design that sufficiently communicates a part of the experience. Aesthetics are up to par.	Is unable to prototype a design that sufficiently communicates a part of the experience. Aesthetics are under par.	Demo Day + Report

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - GROUP

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting <i>P1 Demo Day</i>	Great presentation altogether. Engages the audience and makes use of founded examples. Presentation and exhibit stand out from the rest.	Well-prepared and convincing presentation. Group demonstrates clear understanding of different media use and uses these effectively.	Sufficiently clear presentation. Group is able to argue for their design within time requirements, supported by sufficiently effective exhibit.	Sloppy, underprepared, incoherent, or otherwise sub-standard presentation a/o exhibit.	Demo Day
	Reporting and Dealing with Scientific Information	Presents an academic report of the design process, beyond 'Good'.	Presents a well-structured and clear report of the design process, with effective descriptions of the work, using different types of media (text, figures, photos, sketches etc.). Group describes provides detail and valid arguments where necessary. References are present; using correct reference style.	Report sufficiently describes the design process and overall design decisions, and provides arguments for these choices. External sources (scientific or otherwise) are part of the process and referenced. Reference style may be incoherent or sloppy.	Is unable to report the design process sufficiently. Report is badly structured, sloppy, incomplete, difficult to understand, exhausting to read, or generally unassessable (incl. placeholder uploads to Canvas). Design decisions lack arguments and evidence. Sources (scientific or otherwise) are unclear or missing. References are not present.	Report

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - GROUP

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Planning and organizing	The group (re)organises and (re)plans project work effectively and close-to-independently.	The group organises and plans their project work effectively, with moderate independence. Demonstrates that they are able to perform and redirect their plans when necessary or advised by the coach.	The group demonstrates sufficient ability to organise and plan their project work. Relies on their coach to redirect their plans.	There is insufficient evidence that the group can sufficiently organise and plan their work. Structural problems.	Report + Coach
	Collaboration (as a group)	Collaboration beyond 'Good'. Group members bring out the best in each other.	Constructive atmosphere in the group, in which all members share ideas and suggestions. Collaboration advances the quality of the work beyond individual contributions.	Generally constructive atmosphere in the group, in which all members have room to contribute to some extent.	No constructive atmosphere in the group during parts of or the whole process, with the effect of hampering the design process.	Report + Coach

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - INDIVIDUAL

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Collaboration (individual)	Can demonstrate a constructive contribution to the project supported by multiple concrete examples as well as moments of leadership. Drives the team. Takes feedback of tutor into account.	Can demonstrate ongoing contribution to teamwork in the project in the report a/o reflection. Provides momentum. Takes feedback of P1 coach into account.	Can demonstrate a positive contribution to the project in the report a/o reflection. Contributes to teamwork as expected. Takes feedback of P1 coach into account.	Cannot convincingly demonstrate a positive contribution to the project in the report a/o reflection. Hampers the team process. Does not take feedback of P1 coach into account.	Report + Reflection
	Reflection and Critical Attitude	Demonstrates understanding of the main learning experience at a concrete and abstract level. Student can describe and critically evaluate evidence of the present in order to direct future learning activities and goals. Reflections are well framed.	Demonstrates understanding of the main learning experiences beyond 'awareness' by use of clear and relevant examples, and describes how these direct future learning activities and goals.	Demonstrates awareness of the main learning experiences and is able to describe how they may direct future activities.	There are no, or incomplete reflections (incl. placeholder uploads to Canvas). Evidence is missing, reflections are irrelevant, shallow, or lack coherence.	Reflection

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - INDIVIDUAL

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Development of Expertise Areas	Can describe the expertise areas separately, is aware of connections between the expertise areas and is able to explain the connections in reflection. Demonstrates excellent personal application of CA and US.	Can describe the expertise areas separately and is aware of connections between the expertise areas. Demonstrates more than sufficient personal application of CA and US.	Can describe the expertise areas separately. Demonstrates sufficient personal application of CA and US, supported by evidence.	Cannot describe the expertise areas separately. Cannot demonstrate personal application of CA and US.	Reflection
	Design and Research Processes	Beyond 'Good'. Reflects well on the process and the implication for future projects.	Demonstrates an understanding of the followed design process, linking it to the Reflective Transformative Design Process. Reflects well on key moments.	Demonstrates awareness of the followed design process, and can sufficiently identify or reflect on key moments.	Cannot sufficiently describe or reflect on the followed design process, or demonstrates a misunderstanding of it.	Reflection

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - INDIVIDUAL

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
ID SKETCHING	Application of 2D sketching techniques (module 1)	Demonstrates consistent application of all 2D sketching techniques within the design process.	Demonstrates good application of most 2D sketching techniques within the design process.	Can sufficiently demonstrate application of (some of) the 2D sketching techniques within the design process.	Does not provide convincing evidence in their ID Sketching portfolio to sufficiently demonstrate application of (some of) the 2D sketching techniques within the design process.	ID Sketching Portfolio
	Application of exploratory sketching techniques (module 2)	Demonstrates consistent application of all exploratory sketching techniques within the design process.	Demonstrates good application of most exploratory sketching techniques within the design process.	Can sufficiently demonstrate application of (some of) the exploratory sketching techniques within the design process.	Does not provide convincing evidence in their ID Sketching portfolio to sufficiently demonstrate application of (some of) the exploratory sketching techniques within the design process.	
	Application of storytelling sketching techniques (module 3)	Demonstrates consistent application of all storytelling sketching techniques within the design process.	Demonstrates good application of most storytelling sketching techniques within the design process.	Can sufficiently demonstrate application of (some of) the storytelling sketching techniques within the design process.	Does not provide convincing evidence in their ID Sketching portfolio to sufficiently demonstrate application of (some of) the storytelling sketching techniques within the design process.	

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 1 - INDIVIDUAL

Registration code: DPB110 CBL-Project 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
ID SKETCHING	Application of additional sketching techniques (modules 4/5/6)	Demonstrates consistent application of additional sketching techniques within the design process.	Demonstrates good application of most additional sketching techniques within the design process.	Can sufficiently demonstrate application of (some of) the additional sketching techniques within the design process.	Does not provide convincing evidence in their ID Sketching portfolio to sufficiently demonstrate application of (some of) the additional sketching techniques within the design process.	ID Sketching Portfolio

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

All group members are responsible for the content of the group report.

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas	Integration of Expertise Areas	Can demonstrate how knowledge, skills, and attitudes from three expertise areas (TR, CA, US) or more were applied during the process. Evidence demonstrates how integrating expertise areas contributed to a convincing final design, beyond the 'Good' level.	Can demonstrate how knowledge, skills, and attitudes from three expertise areas (TR, CA, US) were applied during the process. Can demonstrate how the integration of expertise areas contributed to the final design.	Can sufficiently demonstrate how knowledge, skills, and attitudes from three expertise areas were applied (TR, CA, US) during the process. Can argue how each expertise area separately contributed to the final design, but integration between expertise areas is not strong.	Cannot sufficiently demonstrate how knowledge, skills, and attitudes from three expertise areas (TR, CA, US) were applied during the process and/or cannot convincingly argue how more than two areas contributed to the final design.	Design research workbook + Demo Day Deliverables + Presentation at demo day
	Design and Research Processes <i>If the design and research process is insufficient, you will receive an H-verdict (hold).</i>	Design and Research Processes	Demonstrates control over the iterative design process. Widening and deepening steps can be identified, by proposing an appropriate design approach based on an understanding of the design context and different design methodologies. Can motivate design decisions based on awareness of systematic inquiry. The design process has led to a convincing final design.	Has conducted an iterative design process in which widening and deepening steps can be identified and can motivate how process activities and design decisions have led to an improved design.	Has conducted an iterative design process and can describe relations between design decisions and process activities.	Is unable to describe the conducted design process and/or cannot, or insufficiently, argue for the conducted design process.	Design research workbook + Demo Day Deliverables + Presentation at demo day

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator <i>Insufficient in the first eight criteria means a retake.</i>	Peripherals (sensors and actuators)	Selection of used modules, two sensors and two actuators is well motivated and documented, demonstrates skill and creativity in used components, components used are fit for the job.	Selection of used modules, two sensors and two actuators is well motivated and documented. Used modules, sensors and actuators are used within their acceptable ranges and adequate for the purpose.	Selection of used modules, two sensors and two actuators is motivated and documented. Used modules, sensors and actuators are used within their acceptable ranges and adequate for the purpose.	Is unable to motivate choice of modules, sensors or actuators, or used less than two sensors or actuators, or motivation is based on false assumptions or components are used outside their limits.	Demo day deliverables
		Structure	Code follows design guidelines, is well readable and accurately documented. On first glance the loop shows clearly what the program is supposed to do, code is easy to assess and debug.	Code follows the design guidelines, is well readable and accurately documented. On first glance the loop shows clearly what the program is supposed to do.	Code follows design guidelines and is accurately documented.	Code does not follow design guidelines, is not accurately documented, or shows lack of code structure (i.e.: large do it all functions, unclear what program is supposed to do from loop, usage of delay blocking execution).	Demo day deliverables
		Modularity	Demonstrates clear understanding of code modularity, uses classes where appropriate, several modules are well fit for later reuse and are already transferred to a personal library.	Demonstrates clear understanding of code modularity, and several modules are well fit for later reuse.	Demonstrates basic understanding of code modularity. Code shows potential to be of use in future prototypes.	Do not show acceptable modularity, code produced is not helpful for future prototypes..	Demo day deliverables

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator <i>(follow-up)</i>	Performance	The main loop is concise and responsive, takes no longer than 5ms to complete unless really well motivated otherwise. Environmental and user inputs are handled instantly. The prototype moves smoothly and has a snappy response to sensors and input.	The main loop is responsive, takes no longer than 5ms to complete, external inputs are handled quickly and response feels snappy.	The main loop is responsive, takes no longer than 5ms to complete, or external inputs are handled quickly and response feels snappy.	The main loop often feels sluggish or response to user input is not snappy but laggy. Prototype is unable to perform key tasks in an acceptable manner.	Demo day deliverables
		Movement	Comprehensive and advanced application of mechanical design knowledge; prototypes include highly effective transitions of movement.	Clear application of mechanical design knowledge; prototypes include effective transitions of movement.	Basic application of mechanical design knowledge; prototypes include basic transitions of movement.	Limited or no application of mechanical design knowledge; prototypes lack transitions of movement.	Demo day deliverables
		3-D printing	Comprehensive and advanced application of 3D-modelling knowledge; models are highly successfully printed and seamlessly integrated.	Clear application of 3D-modeling knowledge; models are successfully printed and integrated.	Basic application of 3D-modelling knowledge; models are somewhat successfully printed and integrated.	Limited or no application of 3D-modelling knowledge; models are not successfully printed or integrated.	Demo day deliverables

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator <i>(follow-up)</i>	Precision	Comprehensive and advanced application of precision engineering knowledge; prototypes exhibit highly smooth and precisely expected movement.	Clear application of precision engineering knowledge; prototypes exhibit smooth and expected movement.	Basic application of precision engineering knowledge; prototypes exhibit some smooth and expected movement.	Limited or no application of precision engineering knowledge; prototypes do not exhibit smooth or expected movement.	Demo day deliverables
		Integration	Electronic and mechanical design are well integrated, Movement is smooth and aware of its surroundings. Under all conditions movement is kept within acceptable limits even when externally manipulated (using feedback).	Electronic and mechanical design are well integrated, Movement is smooth and aware of its surroundings, movement is kept within acceptable limits.	Electronic and mechanical design integration is on par. Movement is smooth and can be found within acceptable limits.	Electronic and mechanical design integration is subpar. Movement can be found outside limits, is clunky or jerky.	Demo day deliverables
		Aesthetics	The prototype shows careful attention to combine engineering and aesthetics.	Clear attention to the prototype aesthetics and details.	The aesthetics of the prototype are up to par.	The aesthetics of the prototype are under par.	The prototype as shown on Demo Day

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC &	Presenting	Presenting at demo day	Can engage the audience in an argument that is based on founded examples. The presentation uses a clear (visual) design identity.	Can give an argument that is based on founded examples. Demonstrates understanding of different media use and uses these effectively.	Builds an argument within time requirements supported by effective media.	Is unable to build an argument within time requirements supported by effective media.	The presentation on Demo Day
		Presenting ID survival guide	Yes The group delivered a presentation with their contribution to the ID survival guide (yes)		No The group did not deliver a presentation with their contribution to the ID survival guide (no)		The presentation about the ID survival guide

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting	Reporting and Dealing with Scientific Information	Presents a design research workbook of the design process, beyond 'Good'.	Presents a design research workbook of the design process with a clear and logical structure and thorough descriptions of the work done, using different types of media (text, figures, photos, sketches, etc.) in which the group describes specific design decisions and provides valid arguments for these choices. Students can link design decisions to the used scientific sources and their activities. References are present; using correct reference style.	Presents a design research workbook of the design process using different types of media (text, figures, photos, sketches, etc.) in which the group describes specific design decisions and provides arguments for these choices. Refers to scientific sources; influence of these sources on decisions made in the process is unclear or missing. References are present, but a coherent structure is missing.	Is unable to report the design process sufficiently. The use of different types of media (text, figures, photos, sketches, etc.) is not supportive. Design decisions lack arguments and evidence. Sources (scientific or otherwise) are unclear or missing. References are not present.	Design research workbook

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Yes	No	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting	Deliver a quality photograph of your prototype	Yes	No	Design research workbook
		Deliver a description of your companion of a maximum 250 words	Yes	No	
		Deliver a specification list of the sensors, activators, and electronics used in the final prototype (this can be a list, exploded view, or annotations of photographs)	Yes	No	
		Deliver a specification of the mechanical components used in the final prototype (this can be a list, exploded view, or annotations of photographs)	Yes	No	

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - GROUP

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC &	Planning and Organizing	Planning and Organizing	The group organizes project work based on extensive planning. The group demonstrates that they can perform and redirect the planning.	The group organizes project work based on planning. The group demonstrates that they can perform and redirect the planning.	The group organizes project work based on simple planning.	There is insufficient evidence that the group makes a plan and organizes their work.	Group reflection in the design research workbook on planning and organizing
	Reflection as a group	Reflection on Teamwork and Collaboration (as a group)	The reflection shows the constructive atmosphere in the group, in which all members share ideas and suggestions. There is evidence that such a collaboration advances the quality of the work beyond individual contributions and group members bring out the best in each other. The group demonstrates how external collaboration (e.g. with users, experts, and stakeholders) makes major contributions to the process.	The reflection shows the constructive atmosphere in the group, in which all members share ideas and suggestions. There is evidence that such a collaboration advances the quality of the work beyond individual contributions. The group demonstrates how some form of external collaboration (e.g. with users, experts, and stakeholders) has contributed to the process beyond mere user testing.	The reflection shows generally constructive atmosphere in the group, in which all members share ideas and suggestions to some extent, includes evidences of some external collaboration (e.g. with users, experts, and stakeholders) leading to minor contributions to the process.	There is no reflection on collaboration as a group, hampering the design process.	Group reflection in the design research workbook on collaboration

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 2 - INDIVIDUAL

Registration code: DPB120 CBL-Project 2

	Sub-criterion	Sub-sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflection as an individual	Reflection on Teamwork and Collaboration (individual)	Can demonstrate a constructive contribution to teamwork in the entire learning process supported by multiple concrete examples as well as moments of leadership. Takes feedback of coach into account	Can demonstrate an ongoing contribution to teamwork in the entire learning process in the reflection. Takes feedback of coach into account.	Can demonstrate own contribution to teamwork in the entire learning process in the reflection. Takes feedback of coach into account.	Cannot demonstrate a contribution to the teamwork in the entire learning process in the reflection.	Individual reflection based on competency development in CBL-P2
		Reflection on expertise area development (individual)	Demonstrates understanding of the main learning experience in the expertise area TR, CA and US at a concrete and abstract level. The student can describe and critically evaluate evidence of the present to direct future learning activities and goals. Reflections are well framed.	Demonstrates understanding of the main learning experiences beyond 'awareness' in the expertise area TR, CA and US with clear and relevant examples, and describes how these direct future learning activities and goals.	Demonstrates awareness of the main learning experiences in the expertise area TR, CA and US with evidence, and can describe how they direct future activities.	There are no reflections on expertise area development on TR,CA and US, evidence is missing, reflections are not relevant or reflections lack coherence	Individual reflection based on competency development in CBL-P2

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 3 - GROUP

Registration code: DPB240 CBL-Project 3

All group members are responsible for the content of the group report.

	Sub-criterium	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	The group is able to apply and demonstrate the integration of three or more expertise areas to their design (research) process and deliverables and to convincingly explain how these areas are considered and addressed.	The group needs minor guidance to apply and demonstrate the integration of three expertise areas to their design (research) process and deliverables and to convincingly explain how these areas are considered and addressed.	The group needs guidance to apply and demonstrate the integration of at least two expertise areas to their design (research) process and deliverables and to convincingly explain how these areas are considered and addressed.	There is too little evidence that the group can apply and demonstrate the integration of at least two expertise areas to their design (research) process and deliverables and cannot convincingly explain how these areas are considered and addressed.	Project work + Demo Day + Design (Research) Report
	Design and Research Processes	The group manages the design process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design (research) activities. Is aware of underlying knowledge and the methodology is recognizable and/or all elements of the design process are skilfully and critically developed.	The group chooses the appropriate methods and tools when conducting design (research) activities to support decisions for simple design cases. Critical elements of the methodology or theoretical framework are appropriately developed however more subtle elements are ignored or unaccounted for.	The group needs guidance in choosing the appropriate methods and tools when conducting design (research) activities to support decisions for simplified cases. The methodology or theoretical framework is recognizable. Critical elements may be missing, incorrectly developed or unfocused.	There is too little evidence that the group chooses the appropriate methods and tools when conducting design (research) activities to support decisions. Approach demonstrates a misunderstanding of the methodology or theoretical framework. Does not show conduct in accordance with the ethical standards of the TU/e.	

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 3 - GROUP

Registration code: DPB240 CBL-Project 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator	The group develops a robust prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	The group develops an integrated prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	The group develops a functional prototype that features (parts of) an interactive system; and/or provides a partial experience (of a service) for the considered stakeholders.	There is too little evidence that the group develops a functional prototype that features (parts of) an interactive system; and/or does not provide an experience (of a service) for the considered stakeholders.	Project work + Demo Day + Design (Research) Report

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 3 - INDIVIDUAL

Registration code: DPB240 CBL-Project 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting	Independently writes a clear and structured reflection. The description, analysis and evaluation of important topics, learning process and outcomes and missed opportunities for learning are included as well. The reflection demonstrates insight in the afore-mentioned topics and leads to intentions for learning that logically follow from the analysis and evaluation.	Needs minor guidance to write a clear and structured reflection. Needs minor guidance to include the description, analysis and evaluation of important topics, learning process and outcomes; and the addition of missed opportunities for learning. Needs minor guidance to demonstrate insight in the afore-mentioned topics and how these insights lead to intentions for learning that logically follow from the analysis and evaluation.	Needs guidance to write a clear and structured reflection. Needs guidance to include the description, analysis and evaluation of important topics, learning process and outcomes; and the addition of missed opportunities for learning. Needs guidance to demonstrate insight in the afore-mentioned topics and how these insights lead to intentions for learning that logically follow from the analysis and evaluation.	There is too little evidence that the student writes a clear and structured reflection. (Elements of) the description, analysis and evaluation of important topics and missed opportunities for learning are lacking. The reflection demonstrates insufficient insight in the afore-mentioned topics and does not lead to intentions for learning that logically follow from the analysis and evaluation.	Reflection + Q&A
	Cooperating	The reflection and presentation include evidence of a constructive atmosphere in the group, members sharing ideas and suggestions, and collaboration that advances the work of the group. There is evidence that group members bring-out the best in each other.	The reflection and presentation include evidence of a constructive atmosphere in the group, members sharing ideas and suggestions, and collaboration that advances the quality of the work. Individual members do not build upon each other's knowledge and skills.	The reflection and presentation include evidence of a constructive atmosphere in the group, members sharing ideas and suggestions. The quality of the deliverables is a product of the contribution of individual group members. Collaboration did not advance the quality of work.	No constructive atmosphere in the group and collaboration does not help the team move forward.	

ASSESSMENT RUBRICS BACHELOR CBL PROJECT 3 - INDIVIDUAL

Registration code: DPB240 CBL-Project 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	The student shows convincing evidence of understanding the importance of PI, is very aware of their own strengths and weaknesses, actively searches and explores PI, can easily link it to the PDP, project, and vision. The student is able to communicate their PI convincingly in text, verbally and visually and can defend it easily during assessment.	The student shows evidence of understanding the importance of PI, is aware of their own strengths and weaknesses, actively searches and explores PI, can link it to the PDP, project, and vision. The student is able to communicate their PI convincingly in text/verbally and can defend it during assessment. The student is developing a corresponding visual language that expresses links to their vision.	The student sees the importance of PI, undertakes activities to explore PI, knows their strengths and weaknesses and includes them in their approach. The student is able to express/communicate the PI in text/verbally and can link this to their project/PDP.	The student does not see the relevance of PI, cannot explain their own strengths and weaknesses, does not relate to goals in PDP, project, vision, and/or does not undertake activities to explore their PI, and/or is unable to communicate their PI.	Reflection + Q&A Formative feedback aimed at guiding students in their DLB385 PI&V learning line year 2
	Vision	Has a clear and convincing vision based on personal motives, past experiences, and past activities. Their vision is extensively supported by examples of current design and technology trends and societal issues. The student is able to thoroughly explain how their vision can be brought to reality and which activities are needed to do so.	Has a convincing vision based on personal motives, past experiences, and past activities. Their vision is supported by examples of current design and technology trends and societal issues. The student is able to explain how the vision can be brought to reality and which activities are needed to do so.	Has made a start for a clear vision based on personal motives, past experiences, and past activities. Their vision is supported by examples of current design and technology trends and societal issues. The student is not able to convincingly explain how the vision can be brought to reality and which activities are needed to do so.	The student is not able to formulate their vision in a consistent way. Personal interests, motives and past experiences are either not sufficiently presented or missing. Reference to societal relevance is missing, as are reflections on current design and technology, societal trends and issues. The activities that are needed to bring their vision to reality are missing.	

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB210 Project 2 design

All group members are responsible for the content of the group report.

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	Are able to apply and demonstrate the integration of three expertise areas to their design research process and deliverables and to convincingly explain how these areas are considered and addressed.	Need minor guidance to apply and demonstrate the integration of three expertise areas to their design research process and deliverables convincingly explain how these areas are considered and addressed.	Need guidance to apply and demonstrate the integration of at least two expertise areas to their design research process and deliverables and to convincingly explain how these areas are considered and addressed.	There is too little evidence that the group can apply and demonstrate the integration of at least two expertise areas to their design process and deliverables and cannot convincingly explain how these areas are considered and addressed.	Project work + Demo Day + Design (Research) Report
	Design and Research Processes	Manages the design process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design (research) activities. Is aware of underlying knowledge and the methodology is recognizable and/or all elements of the design process are skill-fully and critically developed.	Chooses the appropriate methods and tools when conducting design research activities to support decisions for simple design cases. Critical elements of the methodology or theoretical framework are appropriately developed however more subtle elements are ignored or unaccounted for.	Needs guidance in choosing the appropriate methods and tools when conducting design (research) activities to support decisions for simplified cases. The methodology or theoretical framework is recognizable. Critical elements may be missing, incorrectly developed or unfocused.	There is too little evidence that the group chooses the appropriate methods and tools when conducting design (research) activities to support decisions. Approach demonstrates a misunderstanding of the methodology or theoretical framework. Does not show conduct in accordance with the ethical standards of the TU/e	

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB210 Project 2 design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator	Develops a robust prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops an integrated prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops a functional prototype that features (parts of) an interactive system; and/or provides a partial experience (of a service) for the considered stakeholders	There is too little evidence that the group develops a functional prototype that features (parts of) an interactive system; and/or does not provide an experience (of a service) for the considered stakeholders.	Project work + Demo Day + Design (Research) Report

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB210 Project 2 design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting	Tells a convincing story targeted at a professional audience and directs the structure and content of the presentation. Uses a personal and attractive (visual) design identity.	Tells a convincing story for the appropriate target group and directs the structure and content of the presentation. Uses an attractive (visual) design identity	Tells a clear story for the appropriate target group and directs the structure and content of the presentation. Uses a clear (visual) design identity.	Tells an unclear story for the appropriate target group and/or does not direct the structure and content of the presentation. Visual design identity is missing or unclear.	Project work + Demo Day + Design (Research) Report
	Reporting and Dealing with Scientific Information	Independently draws a clear and professional picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. Coach and examiner could argue for: <ul style="list-style-type: none"> – The financial viability of a business plan – The product being taken further by a company – The ability to publish the design research results 	Draws a clear picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.	Draws an adequate picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.	Does not draw an adequate picture of the design challenge. Does not provide a clear description of different perspectives and potential approaches. Does not argument choices that have been made. Uses references to external sources incorrectly.	

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB210 Project 2 design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Organizing and Planning	Independently makes or redirects planning, is able to organize work and is able to discuss and take appropriate actions when necessary.	Is able to make or stick to a planning, needs minor guidance to organize work or modify planning when necessary.	Needs guidance to make or stick to a planning, needs guidance to organize work or modify planning when necessary.	Little or no evidence that student has a planning OR student is unable to organize or modify planning when necessary.	Project work + Demo Day + Design (Research) Report

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH)-INDIVIDUAL (PHASING OUT)

Registration code: DPB210 Project 2 design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting	Independently writes a clear and structured reflection. The description, analysis and evaluation of important topics, learning process and outcomes and missed opportunities for learning are included as well. The reflection demonstrates insight in the afore-mentioned topics and leads to intentions for learning that logically follow from the analysis and evaluation.	Needs minor guidance to write a clear and structured reflection. Needs minor guidance to include the description, analysis and evaluation of important topics, learning process and outcomes; and the addition of missed opportunities for learning. Needs minor guidance to demonstrate insight in the afore-mentioned topics and how these insights lead to intentions for learning that logically follow from the analysis and evaluation.	Needs guidance to write a clear and structured reflection. Needs guidance to include the description, analysis and evaluation of important topics, learning process and outcomes; and the addition of missed opportunities for learning. Needs guidance to demonstrate insight in the afore-mentioned topics and how these insights lead to intentions for learning that logically follow from the analysis and evaluation.	There is too little evidence that the student writes a clear and structured reflection. (Elements of) the description, analysis and evaluation of important topics and missed opportunities for learning are lacking. The reflection demonstrates insufficient insight in the afore-mentioned topics and does not lead to intentions for learning that logically follow from the analysis and evaluation.	Reflection + Q&A
	Cooperating	Constructive atmosphere in the group, members share ideas and suggestions, and collaboration advances the work of the group. Group members bring-out the best in each other.	Constructive atmosphere in the group, members share ideas and suggestions, and collaboration advances the quality of the work. Individual members do not build upon each other's knowledge and skills.	Constructive atmosphere in the group, members share ideas and suggestions. Quality of deliverables is a product of the contribution of individual group members. Collaboration did not advance the quality of work.	No constructive atmosphere in the group and collaboration does not help the team move forward.	

ASSESSMENT RUBRICS BACHELOR PROJECT 2 DESIGN (RESEARCH)-INDIVIDUAL (PHASING OUT)

Registration code: DPB210 Project 2 design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	Understands the importance very well, is very much aware of their own strengths and weaknesses, actively searches and explores PI, can easily link it to the PDP, project, and vision. The student is perfectly able to communicate the PI well in text/verbally and can defend it easily during assessment. The student is developing a corresponding visual language that expresses links to vision.	Understands the importance, is aware of their own strengths and weaknesses, actively searches and explores PI, can link it to the PDP, project, and vision. The student is able to communicate the PI well in text/verbally and can defend it during assessment. The student is developing a corresponding visual language that expresses links to vision.	The student sees the importance, undertakes activities to explore PI, knows their strengths and weaknesses and includes them in approach. The student is able to express/communicate the PI in text/verbally and can relate to project/PDP.	The student does not see the relevance of PI, cannot explain their own strengths and weaknesses, does not relate to goals in PDP, project, vision, and/or does not undertake activities to explore PI, and/or is unable to communicate the PI.	Reflection + Q&A
	Vision	Has a very well argued vision based on personal motives, past experiences, and past activities. The vision is extensively supported by examples of current design and technology trends and societal issues. The student is able to elaborately explain how the vision can be brought to reality and which activities are needed to do so.	Has an argued vision based on personal motives, past experiences, and past activities. The vision is supported by examples of current design and technology trends and societal issues. The student is able to explain how the vision can be brought to reality and which activities are needed to do so.	Has made a start for an argued vision based on personal motives, past experiences, and past activities. The vision is supported by examples of current design and technology trends and societal issues. The student is not able to convincingly explain how the vision can be brought to reality and which activities are needed to do so.	Not able to formulate their vision in a consistent way. Personal interests, motives and past experiences are either not well presented or missing. Reference to societal relevance is missing, as well as reflections on current design and technology, societal trends and issues. The bridge between vision and reality is missing.	

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

All group members are responsible for the content of the group report.

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	The group convincingly demonstrates how knowledge and skills from all expertise areas were considered in process and deliverables and convincingly explains how all expertise areas are considered. The group demonstrates integration of at least two expertise areas on an advanced level.	The group needs minor guidance to apply and demonstrate the contribution of at least four expertise areas to their process and deliverables and convincingly explains how these areas are considered and addressed. The group demonstrates integration of at least one expertise area on an advanced level.	The group needs guidance to apply and demonstrate the contribution of at least three expertise areas to their process and deliverables and convincingly explains how these areas are considered and addressed.	There is too little evidence that the group can apply and demonstrate the contribution of at least three expertise areas to their process and deliverables and cannot convincingly explain how these areas are considered and addressed.	Project work + Demo Day + Design (Research) Report
	Design and Research Processes	Manages the design research process but needs minor guidance to frame their research and/or to choose the appropriate methods and tools to conduct design research activities to contribute (new) knowledge. Is aware of underlying knowledge and the methodology is recognizable and/or all elements of the design research process are skilfully and critically developed.	Need minor guidance to frame their research and/or choose the appropriate methods and tools when conducting design research activities to contribute (new) knowledge. Critical elements of the methodology or theoretical framework are appropriately developed however more subtle elements are ignored or unaccounted for.	Need guidance to frame their research and/or choose the appropriate methods and tools when conducting design research activities to contribute (new) knowledge. The methodology or theoretical framework is recognizable. Critical elements may be missing, incorrectly developed or unfocused.	There is too little evidence that the group is able to frame their research and choose the appropriate methods and tools when conducting design research activities to contribute (new) knowledge. Approach demonstrates a misunderstanding of the methodology or theoretical framework. Does not show conduct in accordance with the ethical standards of the TU/e.	

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator	Develops a robust prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops an integrated prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops a functional prototype that features (parts of) an interactive system; and/or provides a partial experience (of a service) for the considered stakeholders.	There is too little evidence that the group develops a functional prototype that features (parts of) an interactive system; and/or does not provide an experience (of a service) for the considered stakeholders.	Project work + Demo Day + Design (Research) Report

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH) - GROUP (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting	Tells a convincing story targeted at a professional audience and directs the structure and content of the presentation.	Tells a convincing story for the appropriate target group and directs the structure and content of the presentation.	Tells a clear story for the appropriate target group and directs the structure and content of the presentation.	Tells an unclear story for the appropriate target group and/or does not direct the structure and content of the presentation.	Project work + Demo Day + Design (Research) Report
	Reporting and Dealing with Scientific Information	Draws an adequate picture of the design research challenge by positioning their work in the relevant design research literature. Documents and convincingly argues their methodological choices. Reports novel insights and critically evaluates them. Writing is clear, structured, and concise. Uses references to external sources correctly. Suitable for publication with only minor corrections.	Draws a clear picture of the design research challenge by positioning their work in the relevant design research literature. Documents and argues their methodological choices in sufficient depth. Reports relevant insights and draws valid conclusions. Writing is clear, structured, and concise. Uses references to external sources correctly.	Draws an adequate picture of the design research challenge by positioning their work in the relevant design research literature. Documents their methodology but fails to (convincingly) argue their choices. Reports some insights and draws partially valid conclusions. Writing is clear, structured, and concise. Uses references to external sources correctly.	Does not draw an adequate enough picture of the design research challenge by positioning their work in the relevant design research literature. Only partially documents their methodology and fails to (convincingly) argue their choices. Does not report insights and/ or draws invalid conclusions. Writing is unclear, lacks a structure and/or exceeds the page limit. Uses references to external sources incorrectly.	
	Organizing and Planning	Independently makes or redirects planning, is able to organize work and is able to discuss and take appropriate actions when necessary.	Is able to make or stick to a planning, needs minor guidance to organize work or modify planning when necessary.	Needs guidance to make or stick to a planning, needs guidance to organize work or modify planning when necessary.	Little or no evidence that student has a planning OR student is unable to organize or modify planning when necessary.	

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH)-INDIVIDUAL (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting	The student writes a clear, structured and concise reflection. Includes the description, analysis and evaluation of (the) important topics [- e.g. collaboration, design research process -] The reflection demonstrates excellent insight in the aforementioned topics and leads to intentions for learning that logically follow from the analysis and evaluation.	The student writes a clear, structured and concise reflection. Includes the description, analysis and evaluation of (the) important topics [- e.g. collaboration, design research process -] The reflection demonstrates good insight in (the) important topics and leads to intentions for learning that logically follow from the analysis and evaluation.	The student writes a mostly clear, structured and concise reflection. Includes (elements of) the description, analysis and evaluation of (the) important topics [- e.g. collaboration, design research process -] The reflection demonstrates sufficient insight in (the) important topics and leads to intentions for learning that logically follow from the analysis and evaluation.	There is too little evidence that the student writes a clear, structured and concise reflection. (Elements of) the description, analysis and evaluation of (the) important topics [- e.g. collaboration, design research process -] The reflection demonstrates insufficient insight in (the) important topics and does not lead to intentions for learning that logically follow from the analysis and evaluation.	Reflection + Q&A
	Cooperating	Constructive atmosphere in the group, members share ideas and suggestions and collaboration advances the work of the group. Group members bring-out the best in each other.	Constructive atmosphere in the group, members share ideas and suggestions and collaboration advances the quality of the work. Individual members do not build upon each other's knowledge and skills.	Constructive atmosphere in the group, members share ideas and suggestions. Quality of deliverables is a product of the contribution of individual group members. Collaboration did not advance the quality of work.	No constructive atmosphere in the group and collaboration does not help the team move forward.	

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH)-INDIVIDUAL (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	Needs minor guidance to understand its importance and to use her PI to steer their work and career. Needs minor guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs minor guidance to describe how their beliefs, norms and values influence their design activities and to connect their PI to their vision and to personal development and project goals. Needs minor guidance to develop a visual language.	Needs guidance to understand its importance and to use their PI to steer their work and career. Needs guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs guidance to describe how their beliefs, norms and values influence their design activities and to connect their PI to their vision and to personal development and project goals. Needs guidance to develop a visual language.	Shows first steps in understanding its importance and is aware of how to use their PI to steer their work. Is aware of how to develop their PI and actively searches and explores PI. Shows first steps in defining who the student is as a designer; to know their strengths and weaknesses. Links between their beliefs, norms and values and their design activities are visible. Shows first steps in connecting PI to their vision and to personal development and project goals. PI, vision, personal development and project goals are present. Is developing a corresponding visual language that expresses links to PI	Is not aware of its importance and does not explore the connection between PI and their work. Does not explore how to develop their PI, to define who the student is as a designer; does not know their strengths and weaknesses. Is not aware of how their beliefs, norms and values influence their design activities. Does not link between PI, vision, personal development and project goals are visible. Is not able to communicate PI.	Reflection + Q&A

ASSESSMENT RUBRICS BACHELOR PROJECT 3 DESIGN (RESEARCH)-INDIVIDUAL (PHASING OUT)

Registration code: DPB220 Project 3 design/design research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	<p>Vision</p>	<p>Needs minor guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs minor guidance in supporting their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Needs minor guidance in connecting vision and design activities.</p>	<p>Needs guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs guidance in supporting their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Needs guidance in connecting vision and design activities. Furthermore, the student needs guidance to explain how their vision can be brought to reality and which points of action can be made to do so or to explain how the actualization of their vision can have an impact on a societal level and/or generate new knowledge.</p>	<p>Has an substantiated vision based on personal experiences and believes. The vision is supported by examples of existing visions, trends in design, reflected in history and societal contexts. Shows first steps in how their vision can be brought to reality and which (design) activities are needed to do so.</p>	<p>Has not made a start for an substantiated vision based on personal experiences and believes. The vision is not supported by examples of existing visions, trends in design, reflected in history and societal contexts. The student is not able to convincingly explain how the vision can be brought to reality and which (design) activities are needed to do so.</p>	<p>Reflection + Q&A</p>

INTERNSHIP

ASSESSMENT RUBRICS

The internship assessment rubrics are meant to translate and transfer a non-academic activity, such as an internship at a company or institute, back into the academic system of Industrial Design so that the student can obtain academic credit for their external learning activity. The following rubrics take into account the original goals set by the student before starting their internship and verify if and how they have been achieved, as well as how relevant they are both for the student's development and for the study path within ID. This is why, for example, we use the same terminology and the same competency areas used within ID. The company is also giving feedback on the internship through the company coach form, however this feedback is not part of the assessment. It can be used to verify the student's success within the company's objectives, which may or may not correspond to the academic successes. For example, it is possible that a very unsuccessful internship experience has provided excellent reflection and personal/ professional growth opportunities for the student, who can now use the experience to guide their academic and career choices differently.

The coach assigned to the student during the B2.2 semester remains as a coach during the B3.1 semester and coaches the student throughout the internship, monitoring that the student is not neglecting their own goals or the requirements of ID. This coach is also responsible for filling out the rubrics after all the internship deliverables have been handed in, and after the final oral presentation of the internship report. The oral presentation is carried out together with a second examiner, whose role is to assure clarity of the activity and overall fairness. The second examiner thus also uses the rubrics to assess the student and has input in the final evaluation, however only one assessment is handed in per student.

For further information on the internship requirements, process and deliverables, please visit our online education guide.

For any questions you may also contact the ID internship coordinator at:

ID.internshipcoordinator@tue.nl

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
INTERNSHIP PROCESS & DELIVERABLES	Learning outcomes/competences	Clear ability to frame learning outcomes / skills, use and/or apply appropriate methods and tools. Manages design process in articulated and critical ways in most of its elements. Needs minor guidance.	Evidence of ability to frame learning outcomes / skills, use and/or apply appropriate methods and tools. Pertinent use of theoretical framework, critical elements are developed appropriately. Needs minor guidance.	Sufficient evidence of ability to frame learning outcomes / skills to achieve, use and/or apply appropriate methods and tools. Pertinent use of theoretical framework although still needs guidance.	Insufficient evidence of ability to frame assignment and reach learning outcomes or skills, no use or application of appropriate methods and tools.	Internship report + Company evaluation form + Reflection + Q&A
	Deliverables (to company)	The company coach/form states the student has conducted their assignment appropriately, professionally and in an independent way. Student has delivered agreed upon assignments and reached (or has gone beyond) goals set with minimal support.	The company coach/form states the student has conducted their assignment appropriately and professionally. Student has delivered agreed upon assignments and reached goals set with normal/substantial assistance or support.	The company coach/form states the student has conducted their assignment appropriately or in a professional way. However, student has not delivered all agreed upon assignments and not reached all the goals set even with assistance or support due to unforeseen causes.	The company coach/form states the student has not conducted their assignment appropriately or in a professional way. Student has not delivered agreed upon assignments and not reached goals set even with assistance or support.	

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
	Deliverables and Communication (to TU/e)	The coach has received communications or regular updates from student during the internship in a way that helped steer the deliverable outcomes, excellent flow between student's PDP and academic internship results.	The coach has received constructive communications or regular updates from student during the internship. There is correspondence between student's PDP and internship results.	The coach has not received communications or regular updates from student during the internship. The internship assignment only partially complies with ID framework but can be relevant to student's personal study path.	The coach has not received communications or updates from student during the internship in a way that damaged the deliverable outcomes, student's PDP and academic internship results. OR internship assignment does not comply with ID framework and student's study path.	Internship report + Company evaluation form + Reflection + Q&A
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting	Convincing and clear story, directed at target group, interesting and insightful. Professional conduct during presentation.	Clear story, appropriate for target group and with a directed structure and content. Professional conduct during presentation.	Clear, linear story. Appropriate for target group but mainly a summary with little insight. Appropriate but not insightful.	Unclear story, lacking in structure and/or content.	
	Reporting	Report/reflection and forms are correct and aesthetically coherent. Student has put clear effort in visual language, content and layout/graphics of deliverables.	Report/reflection and forms are correct, student has put clear effort in visual language, content and layout/graphics of deliverables.	Report/reflection and forms are handed in correctly but have (minor) mistakes, student has put some effort in visuals/ content of deliverables, but it is not consistent	Report/reflection or forms are missing or have serious mistakes (references, spelling, content)	
	Organizing and Planning	Independently makes or redirects planning, is able to organize work and is able to discuss and take appropriate actions when necessary.	Is able to make or stick to a planning, needs minor guidance to organize work or modify planning when necessary.	Needs guidance to make or stick to a planning, needs guidance to organize work or modify planning when necessary.	Little or no evidence that student has a planning OR student is unable to organize or modify planning when necessary.	

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting	Is able to relate choices to activities, assignment, PDP or PI and Vision. There is a strong connection between conclusions and PDP/ future direction/activities and they are coherent.	Is able to relate choices to activities, assignment, PDP or PI and Vision. There is a connection between conclusions and PDP/ future direction/ activities but needs guidance in making it coherent.	Needs guidance to relate choices to activities, assignment, PDP or PI and Vision. There is little connection between conclusions and PDP/ future direction/ activities	Little or no evidence of reflection upon their choices, activities and assignment. No clear connection of conclusions to PDP, PI, Vision or future activities.	Internship report + Company evaluation form + Reflection + Q&A
	Cooperating	Reflects and applies feedback, has good teamwork skills, pro-actively seeks third parties or stakeholders and convincingly includes the value of the skills/contributions of the collaborations in the assignment in multiple ways.	Reflects and applies feedback, has good teamwork skills, pro-actively seeks third parties or stakeholders and correctly includes their skills/contributions in the assignment.	Reflects on feedback, is able to demonstrate positive contributions of teamwork on the assignment, takes into account third parties.	Unable to take in or understand feedback, cannot demonstrate a positive contribution with third parties nor teamwork.	

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Sub-criterium	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	Clearly communicates, describes and utilizes PI. Is independently able to further develop PI and corresponding visual language.	Clearly communicates and includes the PI in their choices and assignment. Awareness of SWOT and personal goals. Needs minor guidance for continuing the development of PI and visual language.	Able to communicate the PI, is aware of how it relates to the assignment and decisions. Still needs lots of guidance to describe or explain beliefs, norms and point of view. Needs guidance to further improve PI and visual language.	Unable to communicate the PI; does not use to inform decisions or understand how it relates to the activities and goals of the internship assignment.	Internship report + Company evaluation form + Reflection + Q&A
	Vision	The student has and is comfortable with their personal vision, they able to develop it further and make it relevant to a societal context.	The student's vision is clear and needs minor guidance in creating more coherence or connect it to their assignment / PI /relevance to a societal context.	The student has a vision but needs guidance to further improve it or connect it to their assignment / PI /relevance to a societal context.	Vision is lacking or has no consistency. There is no reflection on or correspondence or relevance to PI or assignment.	
COMPETENCE DEVELOPMENT	Integration of Expertise Areas <i>Individual</i>	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/ extracurricular activities or portfolio and demonstrates in-depth knowledge in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/ extracurricular activities or portfolio and demonstrates in-depth knowledge in at least one area.	Can describe the expertise areas separately, is aware of connections between the expertise areas and is able to explain the connections either in reflection on project/courses/ extracurricular activities or portfolio.	Cannot describe the expertise areas separately, is unaware of connections between the expertise areas and is unable to explain the connections either in reflection on project/courses/ extracurricular activities or portfolio.	

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Excellent	Good	Sufficient	Insufficient	N.a.	Information source
Business and Entrepreneurship	Student has understood, interpreted and applied the expertise area's principles in a correct, innovative and personally relevant way.	Student has understood and applied the expertise area's principles in a correct and pertinent way.	Student has understood and applied expertise area's basic principles.	Student has not understood/ misused expertise area's basic principles.		Internship report + Company evaluation form + Reflection + Q&A
Creativity and Aesthetics	Student has understood, interpreted and applied the expertise area's principles in a correct, innovative and personally relevant way.	Student has understood and applied the expertise area's principles in a correct and pertinent way.	Student has understood and applied expertise area's basic principles.	Student has not understood/ misused expertise area's basic principles.		
Math, Data, and Computing	Student has understood, interpreted and applied the expertise area's principles in a correct, innovative and personally relevant way.	Student has understood and applied the expertise area's principles in a correct and pertinent way.	Student has understood and applied expertise area's basic principles.	Student has not understood/ misused expertise area's basic principles.		
Technology and Realization	Student has understood, interpreted and applied the expertise area's principles in a correct, innovative and personally relevant way.	Student has understood and applied the expertise area's principles in a correct and pertinent way.	Student has understood and applied expertise area's basic principles.	Student has not understood/ misused expertise area's basic principles.		

ASSESSMENT RUBRICS BACHELOR INTERNSHIP - INDIVIDUAL

Registration codes: DPB310 Internship National Company, DPB320 Internship International Company, DPB330 Internship University Abroad, DPB350 Research Project

	Excellent	Good	Sufficient	Insufficient	N.a.	Information source
User and Society	Student has understood, interpreted and applied the expertise area's principles in a correct, innovative and personally relevant way.	Student has understood and applied the expertise area's principles in a correct and pertinent way.	Student has understood and applied expertise area's basic principles.	Student has not understood/ misused expertise area's basic principles.		Internship report + Company evaluation form + Reflection + Q&A
Has met goals as described in PDP	Has gone above and beyond all the self-prescribed goals and defined/developed new ones OR has changed trajectory and is happier with their new PDP developments.	Has met all the self-prescribed goals OR has changed trajectory and is satisfied with PDP development.	Has not met all the self-prescribed goals but is aware of why/ what happened OR has changed trajectory and is in re-development of a more fitting PDP.	Has not met self-prescribed goals and is unaware of why/ what could've been done to prevent this.		

*N/A can be used for any criteria without penalty to the student or project. It should not be used for the other criteria. Please note that each assessment has to include at least two expertise areas in order to be sufficient.

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Examination moment: The criteria and sub-criteria and the level descriptions for each sub-criterion are fixed.

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas					-
	<i>Project</i>					
	1.1 Total	Excellent	Good	Sufficient	Insufficient	-
	1.1.A. The student demonstrates application of Attitudes, Skills and Knowledge from the different Expertise Areas in the design and process at the expected level.	In all EAs.	In four EAs.	In three EAs.	In two EAs or less/ OR there is too little evidence to assess.	Report + Presentation + Q&A
	1.1.B. The student demonstrates advanced (i.e. beyond sufficient in EA rubrics) integration of Attitudes, Skills and Knowledge from the different Expertise Areas in the design and process.	Yes, in two or more EAs.	Yes, in one EA.	No		Report + Demonstrator(s)

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
OVERALL COMPETENCE OF DESIGNING	Design and Research Processes	1.2 Total	Excellent	Good	Sufficient	Insufficient	-
	<i>Project</i>	1.2.A. The student's methodology is recognizable.	Yes, and the student demonstrates skillful and critical development of (elements of) the design process.	Yes, beyond a basic level.	Yes, at a basic level.	(1) No, or; (2) there is too little evidence, or; (3) yes, but critical elements are underdeveloped or misunderstood. And/or does not show conduct in accordance with the ethical standards of the TU/e.	Report + Presentation + Q&A
		1.2.B. The student chooses the appropriate methods and tools to conduct the design process.	Yes, individually.	Yes, but with moderate guidance.	Yes, but requires guidance.	There is too little evidence to support this, or the student needs too much guidance.	Report + Presentation + Q&A + Coach input (made explicit in feedback)
		1.2.C. The student is aware of the theoretical knowledge underlying the methods and tools used.	Yes, including the more subtle elements.	Yes, but the more subtle elements are unaccounted for or misunderstood.	Yes, at a basic level.	No, underlying theory is either missing, underdeveloped or misunderstood.	Report + Presentation + Q&A

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
Demonstrator Project	<i>1.3 Total</i>	Excellent	Good	Sufficient	Insufficient	-
	1.3.A. The student has developed a prototype that demonstrates (parts of) an interactive system.	Yes, and the prototype is fully integrated, well detailed and finished at a high communication value.	Yes, and the prototype is fully integrated.	Yes	No, or too little evidence, or the prototype is inappropriate.	Demonstrator(s) + Presentation
	1.3.B. The demonstrator provides a meaningful experience for the appropriate stakeholders.	The demonstrator provides a highly accurate, complete and convincing experience.	The experience of the demonstrator goes beyond 'sufficient' level.	Yes, but only to the extent that the student can do a basic yet meaningful evaluation.	No, or too little evidence.	Demonstrator(s) + Presentation + Report (feedback of external parties)

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting <i>Holistic</i>	2.1 Total	Excellent	Good	Sufficient	Insufficient	-
		2.1.A. The presentation – provides proper argumentation – shows enthusiasm – content is appropriate for audience	At least one is beyond the expectation and all meet the expectation.	All meet the expectation or At least one is beyond the expectation.	At least two meet the expectation.	Less than two meet the expectation.	Presentation + Q&A
		2.1.B. Directs the structure and content of the presentation.	Yes			No	Presentation
		2.1.C. The visual design is – consistent – personal – professional	At least one is beyond the expectation and all meet the expectation.	All meet the expectation or At least one is beyond the expectation.	At least one meets the expectation.	None meet the expectation.	Presentation

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information <i>Project</i>	2.2 Total	Excellent	Good	Sufficient	Insufficient	-
	2.2.A. The report/student – presents the body of knowledge of relevant approaches – uses literature to support the design methods and decisions – shows proactive seeking of professional advice	At least one is beyond the expectation and all meet the expectation	All meet the expectation or At least one is beyond the expectation	At least two meet the expectation	Less than two meet the expectation	Report + Presentation + Q&A + Coach input (made explicit in feedback)	
	2.2.B. Provides a clear description of different perspectives and potential approaches.	Yes			No	Report + Presentation + Q&A	
	2.2.C. Arguments choices that have been made.	Yes			No	Report + Presentation + Q&A	
	2.2.D. The reference is – correct on the reference style – appropriate on the content	Both meet the expectation.			Less than two meet the expectation.	Report + Presentation	

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information <i>Project</i>	2.2.E. Coach and examiner could argue for	At least one of the follows: (1) The financial viability of a business plan (2) The product being taken further by a company; (3) The potential ability to publish the design research results.	No		Report + Portfolio (evidence explicitly referenced in feedback)	
	Organizing and Planning <i>Project</i>	2.3 <i>Total</i>	Excellent	Good	Sufficient	Insufficient	-
		2.3.A. Make, perform and redirect their planning (looking forward).	Proactively planned and responded all or most-of the time.	Proactively planned sometimes and highly responsive.	Reactively planned but mostly responsive.	Mostly reactive and sometimes not responsive.	Report + Portfolio + Coach input (made explicit in feedback)
		2.3.B. Organize their work and to undertake action if needed (manipulating circumstances and resources).	Proactively made proposals and responds all or most-of the time.	Proactively made proposals sometimes and highly responsive.	Reactively made proposals but mostly responsive.	Mostly reactive and sometimes not responsive.	Report + Portfolio + Coach input (made explicit in feedback)

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting					-
	<i>Holistic</i>					
	2.4 Total	Excellent	Good	Sufficient	Insufficient	
	2.4.A. The reflection – specifically addressed previous learning goals with the learning process – connecting the learning outcomes to the PI, V, and PDP – specifically formulated future learning activities – critical yet constructive attitude	At least one is beyond the expectation and all meet the expectation	All meet the expectation or At least one is beyond the expectation	At least two meet the expectation	Less than two meet the expectation	Portfolio + Presentation + Q&A
	2.4.B. Consistently relate their choices of learning activities and work activities to their professional identity and vision.	Consistent between and within all deliverables.	Minor inconsistencies between or within the deliverables.	Minor inconsistencies between and within the deliverables.	Major inconsistencies between and/or within the deliverables.	Portfolio + Presentation + Q&A

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Cooperating <i>Project</i>	2.5 Total	Excellent	Good	Sufficient	Insufficient	
		2.5.A. Is pro-active in finding collaboration and interacting with third parties.	Yes, and there is extensive interaction.	Yes		No. There's no collaboration with third parties (experts, stakeholders, clients).	Report + Presentation + Q&A
		2.5.B. Constructive atmosphere in the collaboration.	Yes			No	Report + Presentation + Q&A + Coach input (made explicit in feedback)
		2.5.C. The student is able to apply the knowledge and skills of the third parties in the deliverables and process.	Convincingly demonstrates and explains the added value of the application of the 3rd parties' knowledge and skills in a wider context.	Convincingly demonstrates and explains the added value of the application of the 3rd parties' knowledge and skills.	Convincingly demonstrates the application of the 3rd parties' knowledge and skills.	Unconvincingly demonstrates the application of the 3rd parties' knowledge and skills	Report + Presentation + Q&A

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
PROFESSIONAL IDENTITY & VISION	Professional Identity <i>Holistic</i>	3.1 Total	Excellent	Good	Sufficient	Insufficient	-
		3.1.A. The PI documents strengths and weaknesses of the student in terms of designerly skill, design process and teamwork as well as in the Expertise Area framework.	All four elements (designerly skill, design process, teamwork, Expertise Area framework) are present and are convincingly used to discuss strengths and weaknesses in detail .	Strengths and weaknesses are described in detail . All four elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention.	Strengths and weaknesses are described in broad lines but with little detail. Only two elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention.	Strengths and weaknesses are not discussed OR fewer than two elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention.	Portfolio + Presentation + Q&A
		3.1.B. The PI describes how a student's beliefs, norms and values influence their design activities.	Strong integral connection between beliefs, norms and values and design activities; the beliefs, norms and values drive the design activities.	Beliefs, norms and values are actively connected to design activities during the process.	Beliefs, norms and values are connected to design activities but the connections are created post hoc.	There is no connection OR no description of the connection.	Portfolio + Presentation + Q&A
		3.1.C. The student uses their PI to take decisions about next (professional) steps.	The student drives the decision taking process and is always in control. The student recognizes situations where specific guidance is needed and uses this to their advantage.	The student drives the decision taking process but is not always in complete control. The student does not always recognize when guidance is needed.	The student needs to be pro-actively guided by the coach. When guided the student is able to take necessary decisions.	Despite guidance the student is not able to take necessary decisions.	Portfolio + Presentation + Q&A

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
PROFESSIONAL IDENTITY & VISION	Vision <i>Holistic</i>	3.2 Total	Excellent	Good	Sufficient	Insufficient	-
		3.2.A. The vision presents the students perspective on and positioning in existing trends in design, history and society. Personal experiences and beliefs are used for this positioning.	The perspective and positioning is present and critical towards existing trends; the critique holds up to questioning. Personal experiences and beliefs are an integral part of the vision.	The perspective and positioning is present and critical towards existing trends; the critique wavers under questioning. Personal experiences and beliefs play a role.	The perspective and positioning is present but uncritical towards existing trends. Personal experiences and beliefs add little substance.	The vision does not offer a perspective or positioning.	Portfolio + Presentation + Report
		3.2.B. The student uses their vision to direct design decisions and activities	The student drives the decision taking process and is always in control. The student recognizes situations where specific guidance is needed and uses this to their advantage.	The student drives the decision taking process but is not always in complete control. The student does not always recognize when guidance is needed.	The student needs to be pro-actively guided by the coach. When guided the student is able to take necessary decisions.	Despite guidance the student is not able to take necessary decisions.	Portfolio + Presentation + Report
		3.2.C. The student brings the vision to reality by having impact on society	Yes			No	Portfolio + Presentation + Report + Q&A

ASSESSMENT RUBRICS BACHELOR FINAL BACHELOR PROJECT - INDIVIDUAL

Registration code: DPB390 Final bachelor project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of expertise areas					-
	<i>Holistic</i>					
	4.1 Total	Excellent	Good	Sufficient	Insufficient	-
	4.1.A. The student can describe the expertise areas separately.	Yes			No	Portfolio + Presentation + Q&A
	4.1.B. The student is aware of the connections between the expertise areas.	Yes			No	Portfolio + Presentation + Q&A
4.1.C. The student is able to explain the connections between expertise areas in reflections on their (extracurricular) learning activities.	Yes			No	Portfolio + Presentation + Q&A	
4.1.D. The student demonstrates in-depth knowledge of (an) Expertise Area(s). Evidence is provided in the portfolio and extends over the complete bachelor.	In-depth knowledge of two Expertise Areas. The other three Expertise Areas are on the expected level.	In-depth knowledge of one Expertise Area. The other four Expertise Areas are on the expected level.	All five Expertise Areas are on the expected level (the student has a balanced profile).	One or more Expertise Areas is below the expected level (this cannot be compensated by in-depth knowledge in a different Expertise Area).	Portfolio + Presentation + Q&A	

ASSESSMENT RUBRICS PRE-MASTER PROJECT - GROUP

Registration code: DPB230 Pre-master project

All group members are responsible for the content of the group report.

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	<p>Focus on those EA's that require attention as pointed out by the DAC:</p> <p>No guidance needed to apply and demonstrate the integration of the expertise areas to the design process and deliverables and to convincingly explain how these areas are considered and addressed.</p>	<p>Focus on those EA's that require attention as pointed out by the DAC:</p> <p>Needs minor guidance to apply and demonstrate the integration of the expertise areas to the design process and deliverables and to convincingly explain how these areas are considered and addressed.</p> <p>Demonstrates advanced level of integration of the expertise areas.</p>	<p>Focus on those EA's that require attention as pointed out by the DAC.</p> <p>Needs guidance to apply and demonstrate the integration of the expertise areas to the design process and deliverables. The students convincingly explain how these areas are considered and addressed.</p>	<p>Focus on those EA's that require attention as pointed out by the DAC:</p> <p>There is too little evidence that the students can apply and demonstrate the integration of at least two expertise areas to the design process and deliverables and cannot convincingly explain how these areas are considered and addressed.</p>	Project work + Demo Day + Report
	Design and Research Processes	<p>Manages the design process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design (research) activities. Is aware of underlying knowledge and the methodology is recognizable and/or all elements of the design process are skill-fully and critically developed.</p>	<p>Chooses the appropriate methods and tools when conducting design (research) activities to support decisions for simple design cases. Critical elements of the methodology or theoretical framework are appropriately developed however more subtle elements are ignored or unaccounted for.</p>	<p>Needs guidance in choosing the appropriate methods and tools when conducting design (research) activities to support decisions for simplified cases. The methodology or theoretical framework is recognizable. Critical elements may be missing, incorrectly developed or unfocused.</p>	<p>There is too little evidence that the group chooses the appropriate methods and tools when conducting design (research) activities to support decisions. Approach demonstrates a misunderstanding of the methodology or theoretical framework.</p> <p>Does not show conduct in accordance with the ethical standards of the TU/e.</p>	

ASSESSMENT RUBRICS PRE-MASTER PROJECT - GROUP

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
	Demonstrator	Develops a robust prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops an integrated prototype that features (parts of) an interactive system; and/or provides a clear experience (of a service) for the considered stakeholders.	Develops a functional prototype that features (parts of) an interactive system; and/or provides a partial experience (of a service) for the considered stakeholders.	There is too little evidence that the group develops a functional prototype that features (parts of) an interactive system; and/or does not provide an experience (of a service) for the considered stakeholders.	Project work + Demo Day + Report

ASSESSMENT RUBRICS PRE-MASTER PROJECT - GROUP

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting	Tells a convincing story targeted at a professional audience and directs the structure and content of the presentation. Uses a personal and attractive (visual) design identity.	Tells a convincing story for the appropriate target group and directs the structure and content of the presentation. Uses an attractive (visual) design identity.	Tells a clear story for the appropriate target group and directs the structure and content of the presentation. Uses a clear (visual) design identity.	Tells an unclear story for the appropriate target group and/or does not direct the structure and content of the presentation. Visual design identity is missing or unclear.	Project work + Demo Day + Report
	Reporting and Dealing with Scientific Information	Independently draws a clear and professional picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. Coach and examiner could argue for: <ul style="list-style-type: none"> – The financial viability of a business plan – The product being taken further by a company – The ability to publish the design research results 	Draws a clear picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.	Draws an adequate picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.	Does not draw an adequate picture of the design challenge. Does not provide a clear description of different perspectives and potential approaches. Does not argument choices that have been made. Uses references to external sources incorrectly.	

ASSESSMENT RUBRICS PRE-MASTER PROJECT - INDIVIDUAL

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Organizing and Planning	Individually organizes future learning (as described in the student's PDP) and consistently relates their choices of learning activities and work activities to their professional identity and vision.	Needs minor guidance to organize future learning (as described in the student's PDP) and needs minor guidance to relate their choices of learning activities and work activities to their professional identity and vision.	Needs guidance to organize future learning (as described in the student's PDP) and needs guidance to relate their choices of learning activities and work activities to their professional identity and vision.	There is too little evidence that the student makes, performs and redirects their planning, organizes their work and undertakes action if needed.	Reflection + Q&A + Portfolio (<i>can be requested by examiners</i>)
	Reflecting	Independently writes a clear and structured reflection. The description, analysis and evaluation of important topics and missed opportunities for learning are included as well. Claims are underscored with strong arguments and supporting illustrations. The reflection demonstrates insight in the afore-mentioned topics and leads to intentions for learning that logically follow from the analysis and evaluation.	Needs minor guidance to write a clear and structured reflection. Needs minor guidance in the description, analysis and evaluation of important topics and missed opportunities for learning. Needs minor guidance in underscoring claims with strong arguments and supporting illustrations. The reflection demonstrates insight in the afore-mentioned topics and leads to intentions for learning that logically follow from the (under minor guidance developed) analysis and evaluation.	Needs guidance to write a clear and structured reflection. Needs guidance in the description, analysis and evaluation of important topics and missed opportunities for learning. Needs guidance in underscoring claims with strong arguments and supporting illustrations. The reflection demonstrates insight in the afore-mentioned topics and leads to intentions for learning that logically follow from the (under guidance developed) analysis and evaluation.	There is too little evidence that the student writes a clear and structured reflection. (Elements of) the description, analysis and evaluation of important topics and missed opportunities for learning are lacking. Claims are insufficiently underscored with arguments and illustrations. The reflection demonstrates insufficient insight in the afore-mentioned topics and does not lead to intentions for learning that logically follow from the analysis and evaluation.	

ASSESSMENT RUBRICS PRE-MASTER PROJECT - INDIVIDUAL

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
	Cooperating	Worked in a group with an extraordinary degree of synergy attained; team members developed skills and ideas through interactions with others.	Worked in a group with high degree of synergy attained; team members developed skills and ideas through interactions with others.	Worked in a group with a moderate synergy attained, either at low level or sporadically; the team realized some benefit from working together beyond simple division of labour	Worked in a group that was a collection of individuals that merely divided the work to be done.	Reflection + Q&A + Portfolio (<i>can be requested by examiners</i>)

ASSESSMENT RUBRICS PRE-MASTER PROJECT - INDIVIDUAL

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	Understands its importance and uses the student's PI to steer their work and career. Continuously develops their PI. Defines who the student they are as a designer. Knows their strengths and weaknesses. Describes how their beliefs, norms and values influence their design activities. Connects their PI to their vision and to personal development and project goals. Has a corresponding visual language.	Needs minor guidance to understand its importance and to use the student's PI to steer their the student's work and career. Needs minor guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs minor guidance to describe how their beliefs, norms and values influence their design activities and to connect the student's PI to their vision and to personal development and project goals. Needs minor guidance to develop a visual language.	Needs guidance to understand its importance and to use the student's PI to steer their work and career. Needs guidance to develop their PI; to define who they are as a designer; to know their strengths and weaknesses. Needs guidance to describe how their beliefs, norms and values influence their design activities and to connect the student's PI to their vision and to personal development and project goals. Needs guidance to develop a visual language.	There is too little evidence that the student understands the importance of and use their PI to steer their activities. Furthermore, there is no evidence that the student continuously develops their PI. The student does not define who they are as a designer and/or does not demonstrate knowledge of their strengths and weaknesses and/or does not describe how their beliefs, norms and values influence their design activities. The link between the student's PI, vision, personal development, and project goals are lacking or unclear and illogical and/or have no corresponding visual language.	Reflection + Q&A + Portfolio (<i>can be requested by examiners</i>)

ASSESSMENT RUBRICS PRE-MASTER PROJECT - INDIVIDUAL

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Vision	Elaborates on their vision, by being critical on existing visions, trends in design and supports their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. There are clear and regular connections between vision and design activities.	Needs minor guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs minor guidance in supporting their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Needs minor guidance in connecting vision and design activities.	Needs guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs guidance in supporting their vision by bringing arguments, which are reflected in history and societal contexts, combined with personal experiences and believes. Needs guidance in connecting vision and design activities. Furthermore, they need guidance to explain how their vision can be brought to reality and which points of action can be made to do so or to explain how the actualization of the student's vision can have an impact on a societal level and/or generate new knowledge.	There is too little evidence that the student elaborates their vision based on personal believes and past experiences. The student's motives do not (always) support their vision and the link with the societal relevance is not fully elaborated and clear. The examples the student brings to explain how to bring their vision to reality through design are not present or vague. The vision is still cluttered, too specific and impersonal. Connections between vision and design activities are too incidental.	Reflection + Q&A + Portfolio (<i>can be requested by examiners</i>)

ASSESSMENT RUBRICS PRE-MASTER PROJECT - INDIVIDUAL

Registration code: DPB230 Pre-master project

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of Expertise Areas In the Competence Profile of the student	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio and demonstrates in-depth knowledge in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio and demonstrates in-depth knowledge in at least one area.	Can describe the expertise areas separately, is aware of connections between the expertise areas and is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio.	Cannot describe the expertise areas separately, is unaware of connections between the expertise areas and is unable to explain the connections either in reflection on project/courses/extracurricular activities or portfolio.	Reflection + Q&A + Portfolio (<i>can be requested by examiners</i>)

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - GROUP

Registration code: DPM115 Project 1 Design

All group members are responsible for the content of the group report.

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	The group is able to apply and demonstrate the integration of all expertise areas to their design process and deliverables and convincingly explains how all expertise areas are considered in the designed system. Demonstrates integration of at least three expertise areas on an advanced level.	The group needs minor guidance to apply and demonstrate the integration of all expertise areas to their design process and deliverables and is able to convincingly explain how these areas are considered and addressed. Demonstrates integration of at least two expertise area on an advanced level.	The group needs guidance to apply and demonstrate the integration of at least four expertise areas to their design process and deliverables and is able to convincingly explain how these areas are considered and addressed. Demonstrates integration of at least one expertise area on an advanced level.	There is too little evidence that the group can apply and demonstrate the integration of at least four expertise areas to their design process and deliverables and cannot convincingly explain how these areas are considered and addressed. The group is not able to demonstrate the integration of at least one expertise area on an advanced level.	Project work + Demo Day + Report
	Design and Research Processes	The group manages the design process for a complex real-life challenge, chooses the appropriate methods and tools to conduct design research activities. All elements of the design (research) methodology are appropriately and critically developed.	The group manages the design process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design research activities. Critical elements of the methodology or theoretical framework are appropriately developed and understood.	The group manages the design process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design research activities. Is aware of underlying knowledge and the methodology is recognizable.	The group is unable to manage the design process for a real-life challenge without guidance. The group does not choose the appropriate methods and tools when conducting design (research) activities. The approach demonstrates a misunderstanding of the methodology or theoretical framework. Does not show conduct in accordance with the ethical standards of the TU/e.	

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - GROUP

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
	Demonstrator	<p>There is appreciation from external experts for at least one of three aspects:</p> <ul style="list-style-type: none"> Well-engineered; Fully experiential; or With high communication potential (museum-quality) 	<ul style="list-style-type: none"> Well-engineered; Fully experiential; or With high communication potential (museum-quality) 	The group develops a robust prototype that features (part of) an intelligent system; and/or provides a clear experience (of a service) for the considered stakeholders.	The group does not develop a robust prototype that features (part of) an intelligent system; and/or does not provide a clear experience (of a service) for the considered stakeholders.	Project work + Demo Day + Report
SCIENTIFIC & PROFESSIONAL S.	Presenting	<p>At least one of the areas:</p> <ul style="list-style-type: none"> Attractive and enjoying impressive presentation that can get commitment from stakeholders or audience; Can direct attention and interest of audience; or Personal and innovative presentation style. 	The group tells a convincing story targeted at a professional audience and directs the structure and content of the presentation.	The group tells a convincing story and directs structure and content of the presentation.	The group does not tell a convincing story targeted at a professional audience and/or direct structure and content of the presentation.	Project work + Demo Day + Report

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - GROUP

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information	<p>The group draws a clear and professional picture of the design challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. There is external evidence (investor support, company feedback or reviewer comments) for at least one of the three aspects:</p> <ul style="list-style-type: none"> • The financial viability of a business plan; • The product being taken further by a company; • The ability to publish the design research results. 	<p>The group draws a clear and professional picture of the design challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. The coach and examiner could argue for:</p> <ul style="list-style-type: none"> • The financial viability of a business plan; • The product being taken further by a company; • The ability to publish the design research results. 	<p>The group draws a clear and professional picture of the design challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.</p>	<p>The group does not draw a clear and professional picture of the design challenge; and/or provides an unclear description of different perspectives and potential approaches; does not argument choices that have been made or provides illogical or inadequate arguments. Uses references to external sources incorrectly.</p>	Project work + Demo Day + Report

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - INDIVIDUAL

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Organizing and Planning	Manages the process of making, performing and redirecting the planning, organizing work and undertaking action if needed.	Individually makes, performs and redirects their planning, organizes their work and undertakes action if needed.	Needs minor guidance to make, perform and redirect their planning. Needs minor guidance to organize their work and to undertake action if needed.	Needs guidance to make, perform and redirect their planning. Needs guidance to organize their work and to undertake action if needed.	Reflection + Q&A
	Reflecting	The student writes a very clear and structured reflection. The description, analysis, and evaluation of [important topics] are included. Missed opportunities for learning are included as well. The reflection demonstrates insight and leads to the right intentions for learning that logically follow from the analysis and evaluation. The reflections are in-depth and expresses a critical attitude. There are hardly opportunities missed for more in-depth reflection or being (more) critical. The student presents evidence for all relevant statements (including pictures).	The student writes a very clear and structured reflection. The description, analysis, and evaluation of [important topics] are included. Missed opportunities for learning are included as well. The reflection demonstrates insight and leads to the right intentions for learning that logically follow from the analysis and evaluation. The reflections are deep but could have been more in-depth. In general, the reflection expresses a critical attitude but some opportunities for being critical are missed. The student presents sufficient evidence for their statements (including pictures).	The student writes a clear and structured reflection. The description, analysis, and evaluation of [important topics] are included. Missed opportunities for learning are included as well. The reflection demonstrates insight in the fore-mentioned topics and leads to intentions for learning that logically follow from the analysis and evaluation. The reflections though are now and then superficial and could have been deeper and more critical and statements should be evidenced more.	The student writes a reflection that lacks clarity and structure. The description, analysis, and evaluation of the [important topics] are lacking, too limit or too superficial. The reflection demonstrates too little insight in the fore-mentioned topics and leads to intentions for learning that do not always follow from the analysis and evaluation.	

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - INDIVIDUAL

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Cooperating	Constructive atmosphere in the group, members share ideas and collaboration advances the work of the group. Group members bring-out the best in each other. Constructive collaboration external stakeholders/third parties and manages the interests and expectations of them in the deliverables and process.	Constructive atmosphere in the group, members share ideas and suggestions, and collaboration advances the quality of the work. Individual members do not build upon each other's knowledge and skills. Constructive collaboration with external stakeholders/third parties.	Constructive atmosphere in the group, members share ideas and suggestions. Quality of deliverables is a product of the contribution of individual group members. Collaboration did not advance the quality of the work. Collaboration with external stakeholders/third parties.	No constructive atmosphere in the group and collaboration does not help the team move forward. No collaboration with external stakeholders/third parties.	Reflection + Q&A
PROFESSIONAL IDENTITY & VISION	Professional Identity	Understands its importance and uses the student's PI to steer their work and career. Continuously develops their PI. Defines who the student is as a designer. Knows their strengths and weaknesses. Describes how their beliefs, norms and values influence the student's design activities. Connects their PI to their vision, to personal development-and project goals for this project. Has a corresponding visual language. Demonstrates (the development of) the student's PI through the project.	Understands its importance and uses the student's their PI to steer their work and career. Continuously develops their PI. Defines who the student is as a designer. Knows their strengths and weaknesses. Describes how their beliefs, norms and values influence the student's design activities. Connects their PI to their vision and to personal development and project goals. Has a corresponding visual language.	Needs minor guidance to understand its importance and to use the student's PI to steer their work and career. Needs minor guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs minor guidance to describe how their beliefs, norms and values influence the student's design activities and to connect their PI to their vision and to personal development and project goals. Needs minor guidance to develop a visual language.	Needs guidance to understand its importance and to use their PI to steer her work and career. Needs guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs guidance to describe how the student's beliefs, norms and values influence the student's design activities and to connect their PI to their vision and to personal development and project goals. Needs guidance to develop a visual language.	

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - INDIVIDUAL

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Vision	Elaborates on their vision, by being critical on existing visions, trends in design and supports their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. There are clear and regular connections between vision and design activities.	Needs minor guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs minor guidance in supporting their vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Needs minor guidance in connecting vision and design activities.	Needs guidance to elaborate on their vision, to be critical on existing visions, trends in design and needs guidance in supporting their vision by bringing arguments, which are reflected in history and societal contexts, combined with personal experiences and believes. Needs guidance in connecting vision and design activities. Furthermore, they need guidance to explain how their vision can be brought to reality and which points of action can be made to do so or to explain how the actualization of the student's vision can have an impact on a societal level and/or generate new knowledge.	There is too little evidence that the student elaborates their vision based on personal believes and past experiences. The student's motives do not (always) support their vision and the link with the societal relevance is not fully elaborated and clear. The examples the student brings to explain how to bring their vision to reality through design are not present or vague. The vision is still cluttered, too specific and impersonal. Connections between vision and design activities are too incidental.	Reflection + Q&A

ASSESSMENT RUBRICS MASTER PROJECT 1 DESIGN - INDIVIDUAL

Registration code: DPM115 Project 1 Design

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of Expertise Areas <i>In the Competence Profile of the student</i>	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or showcase and demonstrates awareness of the academic state-of-the-art in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio and demonstrates in-depth knowledge in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities and demonstrates in-depth knowledge in at least one area.	Can describe the expertise areas separately, is aware of connections between the expertise areas and is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio.	Reflection + Q&A

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	Are able to apply and demonstrate the integration of all expertise areas to their design research process and deliverables and to argue how their deliverables contribute (new) knowledge to/confirm knowledge of at least one expertise area.	Need minor guidance to apply and demonstrate the integration of all expertise areas to their design research process and deliverables and to argue how their deliverables contribute (new) knowledge to/confirm knowledge of at least one expertise area.	Need guidance to apply and demonstrate the integration of at least four expertise areas to their design research process and deliverables and to argue how their deliverables contribute (new) knowledge to/confirm knowledge of at least one expertise area.	There is too little evidence that the student can apply and demonstrate the integration of at least four expertise areas to their design research process and deliverables and is able to argue how and their deliverables contribute/confirm (new) knowledge to/of at least one expertise area.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A
	Design and Research Processes	Individually manages the design research process for a complex real-life challenge, individually chooses the appropriate methods and tools to conduct design research activities. All elements of the design (research) methodology are appropriately and critically developed.	Manages the design research process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design research activities. Critical elements of the methodology or theoretical framework are appropriately developed and understood.	Manages the design research process for a real-life challenge but needs guidance to choose the appropriate methods and tools to conduct design research activities. Is aware of underlying knowledge and the methodology is recognizable.	Needs guidance to manage the design research process for a real-life challenge and the student does not choose the appropriate methods and tools when conducting design (research) activities. Approach demonstrates a misunderstanding of the methodology or theoretical framework. Does not show conduct in accordance with the ethical standards of the TU/e.	

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
	Demonstrator	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value and the prototype(s) make a strong contribution in itself, according to external experts/reviewers.	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value and the prototype(s) make a strong contribution in itself.	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value.	The demo or research prototypes were not especially crafted for their specific purpose and roles in the acquisition of knowledge or creation of value.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A
SCIENTIFIC & PROFESSIONAL S.	Presenting	At least two of the areas: <ul style="list-style-type: none"> – Attractive and enjoying impressive presentation that can get commitment from stakeholders or audience; – Can direct attention and interest of audience; or – Personal and innovative presentation style. 	At least one of the areas: <ul style="list-style-type: none"> – Attractive and enjoying impressive presentation that can get commitment from stakeholders or audience; – Can direct attention and interest of audience; or – Personal and innovative presentation style. 	Tells a convincing story targeted at a professional audience and directs structure and content of the presentation.	Does not tell a convincing story targeted at a professional audience and/or direct structure and content of the presentation.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information	Independently draws a clear and professional picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. There is external evidence (investor support, company feedback or reviewer comments) for at least one of the three aspects: <ul style="list-style-type: none"> – The financial viability of a business plan; – The product being taken further by a company; – The ability to publish the design research results. 	Independently draws a clear and professional picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly. The coach and examiner could argue for: <ul style="list-style-type: none"> – The financial viability of a business plan; – The product being taken further by a company; – The ability to publish the design research results. 	Independently draws a clear and professional picture of the design (research) challenge. Provides a clear description of different perspectives and potential approaches. Arguments choices that have been made. Uses references to external sources correctly.	The student does not draw a clear and professional picture of the design challenge; and/or provides an unclear description of different perspectives and potential approaches; does not argument choices that have been made or provides illogical or inadequate arguments. Uses references to external sources incorrectly.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A
	Organizing and Planning	Manages the process of making, performing and redirecting the planning, organizing work and undertaking action if needed. Challenges experts with substantiated arguments.	Manages the process of making, performing and redirecting the planning, organizing work and undertaking action if needed.	Individually makes, performs and redirects their planning, organizes their work and undertakes action if needed.	Needs guidance to make, perform and redirect their planning, organize their work and undertake action if needed.	

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting	Individually and continuously organizes future learning (as described in the student's PDP) and consistently relates their choices of learning activities and work activities to the student's professional identity and vision.	Individually organizes future learning (as described in the student's PDP) and consistently relates their choices of learning activities and work activities to the student's professional identity and vision.	The student organizes future learning (as described in the student's PDP) and relates their choices of learning activities and work activities to their professional identity and vision.	Needs guidance to organize future learning (as described in the student's PDP) and relate their choices of learning activities and work activities to their professional identity and vision.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A
	Cooperating	Constructive atmosphere in the collaboration. The student is able to demonstrate and convincingly explain the value of the collaboration with third parties/stakeholders (e.g. users/participants, clients) and manages the interests and expectations of them in the deliverables and process.	Constructive atmosphere in the collaboration. The student is able to demonstrate the value of the collaboration with third parties/stakeholders (e.g. users/participants, clients) and manages the interests and expectations of them in the deliverables and process.	Constructive atmosphere in the collaboration. The student is able to apply the knowledge and skills of third parties/stakeholders (e.g. users/participants, clients) and manages the interests and expectations of them in the process.	There is no constructive atmosphere in the collaboration with third parties/stakeholders (e.g. users/participants, clients). The student is not able to apply the knowledge and skills of third parties/stakeholders in the deliverables and process. The student is not able to manage the interests and expectations of third parties/stakeholders.	

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	<p>Understands its importance and uses their PI to steer their work and career. Continuously develops their PI. Defines who the student is as a designer. Knows their strengths and weaknesses. Describes how the student's beliefs, norms and values influence the student's design activities. Connects their PI to their vision, to personal development-and project goals for this project, as well as to the preparation for the Final Master Project, graduation and/or career. Has a corresponding visual language. Demonstrates (the development of) the student's PI through the project.</p>	<p>Understands its importance and uses their PI to steer their work and career. Defines who the student is as a designer. Knows their strengths and weaknesses. Describes how the student's beliefs, norms and values influence the student's design activities. Connects their PI to their vision, to personal development-and project goals for this project, as well as to the preparation for the Final Master Project, graduation and/or career. Has a corresponding visual language.</p>	<p>Understands its importance and uses their PI to steer their work and career. Continuously develops their PI. Defines who the student is as a designer. Knows their strengths and weaknesses. Describes how the student's beliefs, norms and values influence the student's design activities. Connects their PI to their vision and to personal development and project goals. Has a corresponding visual language.</p>	<p>Needs guidance to understand its importance and does not use their PI to steer their work and career. Needs guidance to develop their PI; to define who the student is as a designer; to know their strengths and weaknesses. Needs guidance to describe how the student's beliefs, norms and values influence the student's design activities and to connect their PI to their vision and to personal development and project goals. Has not developed a visual language.</p>	<p>Project work + Demo Day + Design (Research) Report + Reflection + Q&A</p>

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Vision	<p>Convincingly explains their vision by being critical on existing visions, trends in design and supports the student's vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes.</p> <p>Convincingly relates the project and other (design) activities to (the development of) the student's vision.</p>	<p>Is able to explain their vision by being critical on existing visions, trends in design and supports the student's vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Convincingly relates the project to (the development of) the student's vision.</p>	<p>Elaborates on their vision, by being critical on existing visions, trends in design and supports the student's vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. There are clear and regular connections between vision and design activities.</p>	<p>Needs guidance to elaborate on their vision, is not critical on existing visions, trends in design. Needs guidance in supporting the student's vision by bringing arguments, which are reflected in history and in societal contexts, combined with personal experiences and believes. Does not connect vision and design activities.</p>	<p>Project work + Demo Day + Design (Research) Report + Reflection + Q&A</p>

ASSESSMENT RUBRICS MASTER PROJECT 2 DESIGN RESEARCH - INDIVIDUAL

Registration code: DPM120 Project 2 Design Research

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of Expertise Areas <i>In the Competence Profile of the student</i>	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or showcase and demonstrates awareness of the academic state-of-the-art in at least three areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or showcase and demonstrates awareness of the academic state-of-the-art in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities or portfolio and demonstrates in-depth knowledge in at least two areas.	Can describe the expertise areas separately, is aware of connections between the expertise areas, is able to explain the connections either in reflection on project/courses/extracurricular activities and demonstrates in-depth knowledge in at least one area.	Project work + Demo Day + Design (Research) Report + Reflection + Q&A

ASSESSMENT RUBRICS MASTER PREPARATION FMP - INDIVIDUAL

Registration code: DDPM210 Preparation Final Master Project

	Sub-criterion	Standards				Information source
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas <i>Project</i>	Excellent	Good	Sufficient	Insufficient	Project work + Demo Day + (Interim) report of activities, FMP Proposal and Planning, Reflection on Competence and PI&V development + Reflection + Q&A
	Design and Research Processes	Excellent	Good	Sufficient	Insufficient Does not show conduct in accordance with the ethical standards of the TU/e.	
	Demonstrator	Excellent	Good	Sufficient	Insufficient	
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting	Excellent	Good	Sufficient	Insufficient	
	Reporting and Dealing with Scientific Information	Excellent	Good	Sufficient	Insufficient	
	Organizing and Planning	Excellent	Good	Sufficient	Insufficient	
	Reflecting	Excellent	Good	Sufficient	Insufficient	
	Cooperating	Excellent	Good	Sufficient	Insufficient	
PROFESSIONAL IDENTITY & VISION	Professional Identity (PI)	Excellent	Good	Sufficient	Insufficient	
	Vision	Excellent	Good	Sufficient	Insufficient	
COMPETENCE DEVELOPMENT	Integration of Expertise Areas <i>In the Competence Profile of the student</i>	Excellent	Good	Sufficient	Insufficient	

ASSESSMENT RUBRICS MASTER PREPARATION FMP - INDIVIDUAL

Registration code: DDPM210 Preparation Final Master Project

	Sub-criterion	Standards		Information source
FMP PROPOSAL	Is this topic suitable for the Final Master Project at id? I.e. does it match with the department's mission and the program's intended learning outcomes?	Sufficient	Insufficient	Project work + Demo Day + (Interim) report of activities, FMP Proposal and Planning, Reflection on Competence and PI&V development + Reflection + Q&A
	Is the student a suitable candidate to conduct this project? Does it connect to their professional identity and vision, and are there sufficient opportunities for competence development (both to develop expertise and to address potential weaknesses to achieve the end-terms).	Sufficient	Insufficient	
	Is the proposed project feasible? Is the proposed project feasible within one semester (based on experience, planning and outcomes first iteration(s)).	Sufficient	Insufficient	
	Can the student communicate it clearly and consistently?	Sufficient	Insufficient	



ASSESSMENT RUBRICS MASTER FMP PROPOSAL - INDIVIDUAL

Registration code: DDPM200 Final Master Project Proposal

	Sub-criterion	Standards		Information source
FMP PROPOSAL	Is this topic suitable for the Final Master Project at id? I.e. does it match with the department's mission and the program's intended learning outcomes?	Sufficient	Insufficient	Project work + FMP Proposal and Planning + Q&A
	Is the student a suitable candidate to conduct this project? Does it connect to their professional identity and vision, and are there sufficient opportunities for competence development (both to develop expertise and to address potential weaknesses to achieve the end-terms).	Sufficient	Insufficient	
	Is the proposed project feasible? Is the proposed project feasible within one semester (based on experience, planning and outcomes first iteration(s)).	Sufficient	Insufficient	
	Can the student communicate it clearly and consistently?	Sufficient	Insufficient	

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Examination moment: The criteria and sub-criteria and the level descriptions for each sub-criterion are fixed.

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source		
OVERALL COMPETENCE OF DESIGNING	Integration of Expertise Areas	<i>1.1 Total</i>	Excellent	Good	Sufficient	Insufficient	-	
		1.1.A. The student demonstrates the application of Attitudes, Skills, and Knowledge from all Expertise Areas in the design and process at (at least) a sufficient level.	Yes				No	Report + Demonstrator(s) + Presentation + Q&A
		1.1.B. The student demonstrates advanced (i.e., beyond sufficient in EA rubrics) integration of Attitudes, Skills, and Knowledge from the Expertise Areas in the design and process.	All EAs.	Three or Four EAs.	Two EAs.		No, or less than two EAs, or there is too little evidence to assess.	Report + Demonstrator(s) + Presentation + Q&A

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
OVERALL COMPETENCE OF DESIGNING	Design and Research Processes	<i>1.2 Total</i>	Excellent	Good	Sufficient	Insufficient	-
		1.2.A The student manages the design process.	Yes, independently.	Yes, with moderate guidance.	Yes, but with significant guidance.	There is too little evidence to support this, or the student needs too much guidance.	Report + presentation + Q&A
		1.2.B The student chooses the appropriate methods and tools to conduct the design process.	Yes, independently.	Yes, with moderate guidance.	Yes, but with significant guidance.	There is too little evidence to support this, or the student needs too much guidance. Does not show conduct in accordance with the ethical standards of the TU/e.	Report + presentation + Q&A + mentor input
		1.2.C The student is aware of the theoretical knowledge underlying the methods and tools used.	Yes, all elements of the design (research) methodology are appropriately and critically developed.	Yes, including the more subtle elements.	Yes, but the more subtle elements are unaccounted for or misunderstood.	No, the underlying theory is either missing, underdeveloped, or misunderstood.	Report + presentation + Q&A

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
OVERALL COMPETENCE OF DESIGNING	Demonstrator					
	1.3 Total	Excellent	Good	Sufficient	Insufficient	-
	1.3.A The student develops a robust prototype AND The prototype provides a meaningful experience (of a service) for the considered stakeholders.	Yes			No	Demonstrator(s)
	1.3.B The prototype is 1) well-engineered, 2) fully experiential, or 3) has high communication potential (museum-quality).	There is appreciation from external experts on at least one of the criteria.	Yes	No	Demonstrator(s)	

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Presenting					-
	2.1 Total	Excellent	Good	Sufficient	Insufficient	
	2.1.A Student 1) directs the structure and content of the presentation and 2) tells a convincing story (e.g., form) targeted at a professional audience.	Both meet the criteria AND at least one is at an advanced level.	Both meet the criteria OR at least one is at an advanced level.	One meets the criteria.	None meets the criteria.	Presentation
	2.1.B The presentation (1) provides rigorous argumentation (2) shows clarity and consistency (3) content is appropriate for the professional audience.	All meet the criteria AND at least one is at an advanced level.	All meet the criteria OR at least one is at an advanced level	At least two meet the criteria.	Less than two meet the criteria.	Presentation
	2.1.C The presentation's visual design is (1) consistent (2) personal (3) professional.	All meet the criteria AND at least one is at an advanced level.	All meet the criteria OR at least one is at an advanced level	At least two meet the criteria.	Less than two meet the criteria.	Presentation

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information	2.2 <i>Total</i>	Excellent	Good	Sufficient	Insufficient	-
		2.2.A The report/ student (1) presents the body of knowledge of relevant approaches (2) uses literature to support the design methods and decisions (3) shows proactive seeking of professional advice.	All meet the criteria AND at least two are at an advanced level.	All meet the criteria AND at least one is at an advanced level.	All meet the criteria.	Less than three meet the criteria	Report + presentation, Q&A + mentor's comment
		2.2.B The report/ student (1) Demonstrates an understanding of different perspectives and potential approaches. (2) Arguments choices that have been made.	Both meet the criteria.			Less than two meet the criteria.	Report + Presentation + Q&A
		2.2.C The reference is (1) correct on the reference style (2) appropriate on the content.	Both meet the criteria.			Less than two meet the criteria.	Report + presentation

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
SCIENTIFIC & PROFESSIONAL SKILLS	Reporting and Dealing with Scientific Information	2.2 Total	Excellent	Good	Sufficient	Insufficient	-
		2.2.D The report's visual design is (1) consistent (2) personal (3) professional.	All meet the criteria AND at least one is at an advanced level.	All meet the criteria OR at least one is at an advanced level.	At least two meet the criteria.	Less than two meet the criteria	Report
		2.2.E - The financial viability of a business plan; - The product being taken further by a company; - The ability to publish the design research results.	There is external evidence for at least one of the three criteria.	The mentor and examiners agree on at least one of the three criteria.	No		Evidences shown with the report and portfolio.

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL	Organizing and Planning					
	2.3 Total	Excellent	Good	Sufficient	Insufficient	-
	2.3.A Student manages to make, perform and redirect their planning (looking forward).	Proactively planned and responded all or most-of the time.	Proactively planned sometimes AND highly Responsive.	Reactively planned but mostly responsive.	Mostly reactive and sometimes not responsive.	Report + (reflections in) Portfolio + mentor's comment
	2.3.B Student manages to organize their work and to undertake action if needed (manipulating circumstances and resources).	Proactively made proposals and responds all or most-of the time.	Proactively made proposals sometimes AND highly responsive.	Reactively made proposals but mostly responsive.	Mostly reactive and sometimes not responsive.	Report + (reflections in) Portfolio + mentor's comment

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflecting					-
	2.4 Total	Excellent	Good	Sufficient	Insufficient	
	2.4.A The reflection (1) specifically addressed previous learning goals with the learning process (2) connecting the learning outcomes to the PI&V (3) specifically formulated future learning activities (4) critical yet constructive attitude.	All meet the criteria AND at least one is at an advanced level.	All meet the criteria OR at least one is at an advanced level.	At least two meet the criteria.	Less than two meet the criteria.	All deliverables
	2.4.B Consistently relate their choices of learning activities and work activities to their professional identity and vision.	Consistent between AND within all deliverables.	Minor inconsistencies between OR within the deliverables.	Minor inconsistencies between AND within the deliverables.	Major inconsistencies between OR within the deliverables.	All deliverables

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source		
SCIENTIFIC & PROFESSIONAL	Cooperating	2.5 Total		Excellent	Good	Sufficient	Insufficient	-
	2.5.A The student manages the interests and expectations of the client(s) /third parties.	Yes, both in the deliverables and process.		Yes, in the process.		No	Report + Presentation + Q&A	
	2.5.B There is a constructive atmosphere in the collaboration.	Yes			No	Report + Presentation + Q&A		
	2.5.C The student is able to apply the knowledge and skills of the third parties in the deliverables and process.	Convincingly demonstrates and explains the added value of the application of the 3rd parties' knowledge and skills in a wider context.	Convincingly demonstrates and explains the added value of the application of the 3rd parties' knowledge and skills.	Convincingly demonstrates the application of the 3rd parties' knowledge and skills.	Unconvincingly demonstrates the application of the 3rd parties' knowledge and skills.	Report + Presentation + Q&A		

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
PROFESSIONAL IDENTITY & VISION	Professional Identity	3.1 Total				-	
	3.1.A. The student understands its importance and uses their PI to steer their work and career. Clearly demonstrates the development of their PI. Connects their PI to their vision and to personal development and project goals.	Yes				No	Portfolio + Presentation
	3.1.B. The PI documents the strengths and weaknesses of the student in terms of designerly skill, design process, and teamwork as well as in the Expertise Area framework.	All four elements (designerly skill, design process, teamwork, Expertise Area framework) are present AND are convincingly used to discuss strengths and weaknesses in detail.	All four elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention AND strengths and weaknesses are described in detail.	Two or Three elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention AND strengths and weaknesses are described in broad lines but with little detail.	Fewer than two elements (designerly skill, design process, teamwork, Expertise Area framework) are given attention OR strengths and weakness are not discussed.		Portfolio + Presentation
	3.1.C. The PI describes how a student's beliefs, norms, and values influence their design activities.	Strong integral connection between beliefs, norms and values and design activities; the beliefs, norms and values drive the design activities.	Beliefs, norms and values are actively connected to design activities during the process.	Beliefs, norms and values are connected to design activities, but the connections are created post hoc.	There is no connection OR no description of the connection.		Portfolio + Presentation

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	3.1 Total				-
	3.1.D The PI has a corresponding visual language.	Yes			No	Portfolio + Presentation
	3.1.E The student demonstrates a clear career path that fits their PI and is able to explain it clearly.	Yes, the student has created a market/academic position that fits their PI. There is a clear match between their PI, vision and the market/academia.	Yes	No		Portfolio + Presentation

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source	
PROFESSIONAL IDENTITY & VISION	Vision	3.2 Total	Excellent	Good	Sufficient	Insufficient	-
		3.2.A. The vision presents the student's perspective on and positioning of existing trends in design, history, and society.	The perspective and positioning is present and critical towards existing trends and the critique holds up to questioning.	The perspective and positioning is present and critical towards existing trends and the critique wavers under questioning.	The perspective and positioning is present but uncritical towards existing trends.	The vision does not offer a perspective on and position in existing trends in design, history and society.	Portfolio + Presentation
		3.2.B. Personal experiences and beliefs are used for this positioning.	Personal experiences and beliefs are an integral part of the vision.	Personal experiences and beliefs play a role.	Personal experiences and beliefs add little substance.	The vision does not offer a positioning in personal experiences and beliefs.	Portfolio + Presentation
		3.2.C The student describes how their vision can be brought to reality and which points of action can be made to do so and explains how the actualization of their vision could have an impact on a societal level and/or generate new knowledge.	Yes, and there are clear and regular connections between their vision and design activities.	Yes	No		Portfolio + Presentation
		3.2.D The vision is consistently communicated through attitude, work, and other forms of communication.	Yes	No			Portfolio + Presentation

ASSESSMENT RUBRICS MASTER FINAL MASTER PROJECT (FMP) - INDIVIDUAL

Registration code: DDPM220 Final Master Project

Sub-criterion		Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of expertise areas	4.1 Total				-
	4.1.A The student can describe and apply the expertise areas separately.	Yes			No	Portfolio + Presentation
	4.1.B The student is aware of the connections between the expertise areas and is able to explain the connections either in reflection on project/courses/ extracurricular activities or showcase.	Yes			No	Portfolio + Presentation
	4.1.C The student demonstrates awareness of the academic state-of-the-art in at least two areas.	Yes, at least four areas.	Yes, at least three areas.	Yes, at least two areas.	No	Portfolio + Presentation

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 1 - INDIVIDUAL

Registration code: DLB384 Professional & personal development (PI&V) learning line 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflection on Collaboration (individual)	In the portfolio, the student describes and evaluates in detail their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. Through illustrative examples in year 1, the student reflects on their contributions to the associated learning activities and identifies areas for potential improvement. They also take feedback into account.	In the portfolio, the student describes and evaluates their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. Through illustrative examples in year 1, the student reflects on their contributions to the associated learning activities. They also take feedback into account.	In the portfolio, the student describes their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. They find it hard to describe their contributions to the related learning activities. They also take feedback into account.	In the portfolio, the student does not describe their collaborative efforts with peers and other stakeholders (including users, clients, experts, etc.), and their contributions to the related learning activities despite the guidance received.	Portfolio
	Presentation of the Portfolio	In the interactive portfolio, the student tells a convincing story and directs the structure and content. Needs guidance to develop a clear (visual) design identity.	In the interactive portfolio, the student tells a clear story and directs the structure and content. Needs minor guidance to develop a clear (visual) design identity.	In the interactive portfolio, the student tells a clear story. Attempts to direct the structure and content. Attempts to use a clear (visual) design identity with the received guidance.	The portfolio is not interactive. Or the student tells an unclear story and/or does not direct the structure and content. Visual identity is missing or unclear despite the guidance.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 1 - INDIVIDUAL

Registration code: DLB384 Professional & personal development (PI&V) learning line 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	(Reflection on) Organizing and Planning	The student is aware of and can describe the relevance of setting goals. They can independently formulate them (formulated as SMART goals when necessary) based on their weaknesses and strengths, and link these goals to their PDP. They can demonstrate this via examples in their learning activities.	The student is aware of and can describe the relevance of setting goals. They need minor guidance to formulate them (formulated as SMART goals when necessary) based on their weaknesses and strengths and link them to their PDP. They can demonstrate this via examples in their learning activities.	The student is aware of and can describe the relevance of setting goals. They need guidance to formulate relevant learning goals based on their weaknesses and strengths and link them to their PDP.	The student is unaware of and cannot describe the relevance of setting goals; or cannot define learning goals based on their strengths and weaknesses and relevance for personal development in their PDP despite the guidance received.	PDP + Portfolio
	Reflection and Critical Attitude	The student demonstrates awareness of the past, and describes, organizes, and critically analyses evidence of the present learning activities to direct future learning activities and goals independently. Reflections are based on personal beliefs and experiences, as well as societal norms and cultural contexts.	The student demonstrates awareness of the past learning activities and describes and analyses evidence of the present learning activities to direct future learning activities and goals with minor guidance. Reflections are based on personal beliefs and experiences, as well as societal norms and cultural contexts.	The student demonstrates awareness of the past learning activities and describes evidence of the present learning activities to direct future learning activities and goals with guidance.	There are no reflections or irrelevant reflections or reflections lacking coherency between past, present and future learning activities, evidence is missing despite the guidance received.	Reflection + Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 1 - INDIVIDUAL

Registration code: DLB384 Professional & personal development (PI&V) learning line 1

	Sub-criterium	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	The student sees the importance of PI and is aware of their strengths and weaknesses, They actively search and explore who they are as designers and what their strengths and weaknesses are, and relate them to the goals in the PDP, the different learning activities, and vision. The student can express/communicate the PI very clearly in text independently.	The student sees the importance of PI and is aware of their strengths and weaknesses. They undertake activities to explore who they are as designers, what their strengths and weaknesses are, and relate them to the goals in PDP. The student can express/communicate the PI clearly in text with minor guidance.	The student sees the importance of PI, is aware of their strengths and weaknesses, and relates it to goals but cannot improve it significantly. They start to define who they are as designers and what their strengths and weaknesses are. The student can communicate PI (textually) with guidance but still has trouble explaining it.	The student does not see the relevance of PI, cannot explain their strengths and weaknesses, does not relate to goals in PDP, project, vision, and/or does not undertake activities to explore PI, and/or is unable to communicate the PI despite the guidance received.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 1 - INDIVIDUAL

Registration code: DLB384 Professional & personal development (PI&V) learning line 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Vision	The student has described a substantiated vision based on personal motives, past experiences, and past activities. The vision is also described by referring to related design, technology, and societal trends and issues with the guidance. The student can describe how the vision can be brought to reality and which activities are needed to do so with guidance.	The student has made a start to describe a substantiated vision based on personal motives, past experiences, past activities, related design, technology, societal trends, and issues with the guidance. The student shows the first steps in how their vision can be brought to reality and which (design) activities are needed to do so with the guidance.	The student has made a start to describe a vision based on personal motives. There is an awareness of and reference to related design, technology, and societal trends and issues. The student cannot describe how the vision can be brought to reality and which activities are needed to do so with the received guidance.	Despite the guidance, the student is not able to formulate their vision consistently. Personal interests, motives, and past experiences are either not described, well presented, or missing. Awareness of related societal trends and issues is missing, and so is that of related design and technology trends and issues. The bridge between vision and reality is missing.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 1 - INDIVIDUAL

Registration code: DLB384 Professional & personal development (PI&V) learning line 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of Expertise Areas	The student can describe the expertise areas separately in reflection on project/courses/extracurricular activities in the portfolio; is aware of connections between the expertise areas, and can explain the connections in reflection on project/courses/extracurricular activities in the portfolio with guidance.	The student can describe the expertise areas separately in reflection on project/course activities in the portfolio and is aware of connections between the expertise areas with guidance.	The student can describe the expertise areas separately in reflection on project/course activities in the portfolio with guidance.	The student cannot describe the expertise areas separately in reflection on project/course activities in the portfolio despite the guidance.	Portfolio
	Personal Development Plan	The student understands how to further develop professional identity, vision, and competencies within the framework of competence-centered learning and can explain it clearly with guidance. They are aware of actions to be taken in this development by looking for links within curricular/extracurricular activities.	The student understands how to further develop professional identity, vision, and competencies within the framework of competence-centered learning and can explain it clearly with guidance.	The student is aware of how to further develop professional identity, vision, and competencies within the framework of competence-centered learning but is unable to explain it clearly with guidance.	The student is not aware of how to further develop professional identity, vision, and competencies within the framework of the expertise areas despite the guidance.	PDP + Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflection on Collaboration (individual)	In the updated portfolio, the student describes and evaluates their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. Through illustrative examples in year 2, the student reflects on their contributions to the associated learning activities and show awareness of areas for potential improvement. They show an understanding of the growth of their collaboration skills by comparing the learning results made in year 1 and year 2. They also take feedback into account.	In the updated portfolio, the student describes and evaluates their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. Through illustrative examples in year 2, the student reflects on their contributions to the associated learning activities. They show an understanding of the growth of their collaboration skills by comparing the related learning results made in year 1 and year 2. They also take feedback into account.	In the updated portfolio, the student describes and evaluates their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. Through illustrative examples in year 2, the student reflects on their contributions to the associated learning activities. They start to be aware of the growth of their collaboration skills but find it still difficult to conclude the growth. They also take feedback into account.	In the updated portfolio, the student describes their collaborative efforts with peers and other stakeholders, such as users, clients, and experts. They find it hard to describe their contributions to the related learning activities. They also take feedback into account. There is a lack of evidence of growth made in year 2 compared to year 1's learning results.	Portfolio
	Presentation of the Portfolio	In the updated interactive portfolio, the student tells a convincing story and directs the structure and content. Independently develop a clear visual language.	In the updated interactive portfolio, the student tells a clear story and directs the structure and content. Needs minor guidance to develop a clear (visual) design identity.	In the updated interactive portfolio, the student tells a clear story and directs the structure and content of the portfolio. Needs guidance to develop a clear (visual) design identity.	The updated portfolio is not interactive. Or the student tells an unclear story and/or does not direct the structure and content. Visual identity is unclear despite the guidance.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	(Reflection on) Organizing and Planning	In the updated portfolio, the student is aware of and can describe the relevance of setting goals for year 2. They independently define learning goals (formulated as SMART goals when necessary) based on their strengths and weaknesses and link them to their PDP in year 2. They show an understanding of their growth in organizing and planning by comparing the related learning results made in year 1 and year 2.	In the updated portfolio, the student is aware of and can describe the relevance of setting goals for year 2. They need minor guidance to define learning goals (formulated as SMART goals when necessary) based on their strengths and weaknesses and link them to their PDP in year 2. They show an understanding of their growth in organizing and planning by comparing the related learning results made in year 1 and year 2.	In the updated portfolio, the student is aware of and can describe the relevance of setting goals for year 2. They need minor guidance to define learning goals (formulated as SMART goals when necessary) based on their strengths and weaknesses and link them to their PDP in year 2. They can demonstrate this via examples in their learning activities of year 2. They find it still difficult to conclude the related growth.	In the updated portfolio, the student does not understand the relevance of setting goals for year 2. Fail to define learning SMART goals based on their strengths and weaknesses and relevance to their PDP in year 2 despite the guidance.	PDP + Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
SCIENTIFIC & PROFESSIONAL SKILLS	Reflection and Critical Attitude	In the updated portfolio, the student independently demonstrates awareness of the past learning activities and describes, organizes, and critically analyses the evidence of the present learning activities and goals in year 2 to direct future learning activities and goals. Reflections are based on personal beliefs and experiences, as well as societal norms and cultural contexts.	In the updated portfolio, the student demonstrates awareness of the past learning activities and describes, organizes, and critically analyses evidence of the present learning activities in year 2 to direct future learning activities and goals with minor guidance. Reflections are based on personal beliefs and experiences, as well as societal norms and cultural contexts.	In the updated portfolio, the student demonstrates awareness of the past learning activities and describes and analyses evidence of the present learning activities in year 2 to direct future learning activities goals with guidance. Reflections are based on personal beliefs and experiences, as well as societal norms and cultural contexts.	In the updated portfolio, there are no reflections or irrelevant reflections or reflections lacking coherency between past, year 2, and future learning activities, evidence is missing despite the guidance.	Reflection + Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Professional Identity	The student sees the importance of PI and is aware of their strengths and weaknesses, they actively search and explore who they are as designers and what their strengths and weaknesses are, and relate them to the goals in the PDP, the different learning activities, and vision in year 2. The student can express/communicate the PI very clearly in text independently. Needs guidance to develop a corresponding visual language that expresses links to PI.	The student sees the importance of PI and is aware of their strengths and weaknesses, they actively search and explore who they are as designers and what their strengths and weaknesses are, and relate them to the goals in the PDP, the different learning activities, and vision in year 2. The student can express/communicate the PI very clearly in text independently.	The student sees the importance of PI and is aware of their strengths and weaknesses. They undertake activities to explore who they are as designers, what their strengths and weaknesses are, and relate them to the goals in PDP in year 2. The student can express/communicate the PI clearly in text with minor guidance.	The student sees the importance of PI but does not understand it, is aware of their strengths and weaknesses, and relates it to goals but cannot improve it significantly in year 2. They start to define who they are as designers and what their strengths and weaknesses are. The student can communicate PI (textually/verbally) but still has trouble explaining it despite the guidance.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
PROFESSIONAL IDENTITY & VISION	Vision	The student has described a substantiated vision based on personal motives, past experiences, past activities, related design, technology, societal trends, and issues with minor guidance. The student can describe how the vision can be brought to reality and which activities are needed to do so with minor guidance.	The student has described a substantiated vision based on personal motives, past experiences, past activities, related design, technology, societal trends, and issues with the guidance. The student can describe how the vision can be brought to reality and which activities are needed to do so with the guidance.	The student has made a start to elaborate on a substantiated vision based on personal motives, past experiences, past activities, related design, technology, societal trends, and issues with guidance. The student shows the first steps in how their vision can be brought to reality and which (design) activities are needed to do so with the guidance.	The student has made a start to describe a vision based on personal motives. There is an awareness of and reference to related design, technology, and societal trends and issues. The student cannot convincingly explain how the vision can be brought to reality and which activities are needed to do so despite the guidance.	Portfolio

ASSESSMENT RUBRICS BACHELOR PROFESSIONAL & PERSONAL DEVELOPMENT (PI&V)

LEARNING LINE 2 - INDIVIDUAL

Registration code: DLB385 Professional & personal development (PI&V) learning line 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient	Information source
COMPETENCE DEVELOPMENT	Integration of Expertise Areas	The student can describe the expertise areas separately in reflection on project/courses/extracurricular activities in the portfolio; is aware of connections between the expertise areas and can explain the connections in reflection on project/courses/extracurricular activities in the portfolio, with minor guidance and/or using scientific literature.	The student can describe the expertise areas separately in reflection on project/courses/extracurricular activities in the portfolio; is aware of connections between the expertise areas and can explain the connections in reflection on project/courses/extracurricular activities in the portfolio with the guidance.	The student can explain the expertise areas separately in reflection on projects/courses in the portfolio and is aware of connections between the expertise areas with the guidance.	The student can describe the expertise areas separately in reflection on projects/course activities in the portfolio and is unaware of the connections between the expertise areas despite the guidance.	Portfolio
	Personal Development Plan	The student understands and clearly explains how to further develop PI, vision, and competencies within the framework of competency-centered learning with minor guidance. They start to take action in this development by looking for links within project/extra-curricular activities.	The student understands how to further develop professional identity, vision, and competencies within the framework of competence-centered learning and can explain it clearly with the guidance. They are aware of actions to be taken in this development by looking for links within curricular/extra-curricular activities.	The student understands how to further develop professional identity, vision, and competencies within the framework of competence-centered learning and can explain it clearly with the guidance.	The student is aware of how to further develop professional identity, vision, and competencies within the framework of competence-centered learning but is unable to explain it clearly despite the guidance.	PDP + Portfolio

EXPERTISE AREA RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
BUSINESS & ENTREPRENEURSHIP	Creating propositions integrating design skills, user insights and technology	Can describe surprising/creative value propositions based using existing processes, methods or tools.	Can describe evident value propositions based using existing processes, methods or tools.	Can describe value propositions based on existing knowledge.	Cannot describe the customer or market value of the design (concept).
	Conducting market analysis and identify competition	Proposes a coherent market/competitor analysis for the design (concepts) based through personal investigation while using existing processes, methods or tools.	Develops a market/competitor benchmark for the design (concepts) by using existing processes, methods or tools.	Proposes a market/competitor benchmark for the design (concepts) based on existing knowledge.	Is unaware of related systems, products or services or of possible competition.
	Entrepreneurial attitude (opportunity spotting)	Creative, ingenuous, pro-active and motivated to develop something new, useful, and better than what currently exists. Pursues opportunities beyond readily available resources.	Creative, ingenuous, pro-active and motivated to develop something new, useful, and better than what currently exists.	Reserved, sees (valid) problems and only limited opportunities, is reluctant to take action.	Naïve, does neither see problems nor opportunities. If action is taken it lacks foundation/motivation.

EXPERTISE AREA RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
CREATIVITY & AESTHETICS	Using techniques and methodology (idea generation, creativity techniques and use of 1st, 2nd, and 3rd person perspective)	Describes and uses creativity techniques. Made considerate use of different creativity techniques. Has systematically generated, selected and/or refined ideas. Expresses doubts and actively seeks for better understanding.	Describes and uses creativity techniques. Made considerate use of different creativity techniques. Has systematically generated, selected and/or refined ideas.	Describes and uses creativity techniques and has systematically wrestled with generating, selecting and/or refining ideas.	Does not use, describe or provides limited description of creativity techniques. Took one idea and went with it or has plenty of ideas but goes nowhere.
	Expressing quality in form, interaction, etc. (trusting the senses, critical attitude towards aesthetics)	There is at least one aspect that is impressive (e.g. quality of finish, sheer size, quality of sound, quality of touch). There is not more than one disappointing feature. and a certain sparkle (ex. integrated feel, believable solution, thorough conceptual narrative).	There is at least one aspect that is impressive (e.g. quality of finish, sheer size, quality of sound, quality of touch). There is not more than one disappointing feature.	There is at least one aspect that is impressive (e.g. quality of finish, sheer size, quality of sound, quality of touch).	There are too many disappointing features and no impressive features (e.g. quality of finish, sheer size, quality of sound, quality of touch).
	Positioning or benchmarking in an academic or historical perspective and using them as sources of inspiration	Clear benchmark some historical perspective clear story of inspiration. Stranger and strong story of inspiration.	Clear benchmark some historical perspective clear story of inspiration.	Some benchmarking and historical perspective.	No benchmarking.
	Approaching the creative process (active decision-taking, reflecting in/on action, balancing intuition and knowledge driven and design narrative)	Balanced and thorough (rationale convincing), good non-linear (iterative) process, multiple threads, agency.	Balanced (rationale convincing) good non-linear (iterative) process, multiple threads.	Some intuition, some based on sourced but not completely balanced (rationale presented). Linear, deeper process (multiple threads).	Random, no rationale, a linear, shallow process.

EXPERTISE AREA RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
MATH, DATA & COMPUTING	Using mathematics and computing theory in design applications	Flawlessly and inspirationally applies more than one tool and theory in design applications	Applies more than one tool and theory in design applications	Applies at least one tool and theory in design applications	Is unable to or does not act as defined under sufficient.
	Using computer science as a means to create software	Is able to create and document software to a level where it can be understood by others, under guidance.	Is able to create robust software, documentation requires knowledge transfer.	Is able to create software which works with minor flaws, documentation is incomplete.	Software has major flaws, no documentation.
	Using computer science as a means to handle data	Is able to generate datasets (acquisition, analytics and representation) that can be used within their own project.	Understands, uses and translates existing/generated datasets (acquisition, analytics or representation).	Understands existing/generated datasets (acquisition, analytics or representation) in their own project.	Is unable to deal with data, despite it being generated or available.
	Attitude	Can create code/data also in context demonstrating a basic understanding of underlying principles.	Can modify existing code/data also in other contexts demonstrating a basic understanding of underlying principles.	Can use existing code/data also in other contexts demonstrating a basic understanding of underlying principles.	“Cutting and Pasting” without any underlying understanding of principles involved.

EXPERTISE AREA RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
TECHNOLOGY & REALIZATION	Communicating scientifically with other engineering disciplines understanding and using specifications and datasheets, documentation of hard- and software, awareness of data science and AI	Provides correct diagrams and uses units and dimensions.	Mostly correct notations, mostly correct diagrams.	Informal explanations, sketchy diagrams.	No scientific notations, no diagrams.
	Designing, exploring, visualizing, creating and demonstrating interactive systems through prototypes using sensors, actuators and computing theory.	Prototype with sensor(s), actuator(s) or connectivity, meaningful and working demo.	Prototype including at least one sensor, working demo.	Simple prototype, some technology, something works.	No prototypes, nothing works.
	Analysing the technical and economic feasibility and making informed judgments using the appropriate tools	Serious calculations, cost-estimates, meaningful deployment of calculus.	Correct calculations of cost or performance.	Informal analysis only.	No analysis.
	Processing information conscientiously	Attention to detail, orderly construction, no loose wires, structured programs.	Attention to detail.	Awareness of details.	Sloppy, messy, no documentation.

EXPERTISE AREA RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
USER & SOCIETY	Approaching design from a user-centred perspective, using methodological collection and analysis of (quantitative and qualitative) data for the purpose of collecting user insights, trends and design evaluation/validation, able to change perspectives	Applies prescribed methods to a well-defined problem, provides a coherent description of the process, demonstrates insight by explaining the 'why' and understands limitations of the method. The argumentation is to the point.	Applies prescribed methods to a well-defined problem, provides a coherent description of the process, demonstrates insight by explaining the 'why' and understands limitations of the method.	Applies prescribed methods to a well-defined problem based on group efforts and is able to provide examples of how methods are applied.	Does not apply prescribed methods or is unable to describe how the method was applied.
	Having theoretical knowledge about user experience and interaction design (perceptual, cognitive, emotional and social as well as developmental aspects); context, culture and trends	Applies prescribed theory/theoretical principles in a creative manner to well-defined problem. Provides a coherent description of the process, demonstrates insight by explaining the 'why' and knows limitations of the method. The argumentation is to the point.	Applies prescribed theory/theoretical principles in a creative manner to well-defined problem. Provides a coherent description of the process, demonstrates insight by explaining the 'why' and knows limitations of the method.	Applies prescribed theory/theoretical principles with little creativity to well-defined problem based on group efforts and is able to provide examples of how the principles are applied.	Does not apply prescribed theory/theoretical principles or is unable to describe how the method was applied.
	Approaching design from a social-cultural context; having hands-on experience with and theoretical knowledge of areas related to societal and economic paradigms, social design, ethics and values	Seriously reflects on the ethical, social and cultural impact using substantiated arguments (e.g. addressing relevant literature).	Connects the ethical perspective and describes the social/cultural impact of design.	Awareness of the social-cultural context of the design.	Cannot describe the social-cultural context in which the design is envisioned.
	Being empathic, sensitive, respectful, ethical, understanding, curious	Coach does not need to direct the attention to the user and the socio-cultural context. Group takes initiative and proposes a method.	Understands the importance of attention for the user in the design process however the coach still needs to direct attention to the user and the socio-cultural context.	Is aware of the importance of attention for the user in the design process, direct attention to the user but coach actually needs to direct attention to the user and the socio-cultural context.	Does not use the advice of the coach and does not demonstrate awareness of the importance of attention for the user and the socio-cultural context in the design process.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Addressing a societal context for design or design research	Successfully addresses a simple case (ill-defined challenge and difficult target group).	Successfully addresses a simple case (clearly defined challenge and difficult target group e.g. children in gym class or elderly in care home).	Successfully addresses a simple case (clearly defined challenge and accessible target group e.g. students at TU/e).	Is unable to design for a simple case.
	Addressing design challenges	Managed the design process by proposing an appropriate design approach based on an understanding of different design methodologies and takes design decisions based on awareness of systematic inquiry.	Has adjusted the suggested design process and can clearly motivate the decisions. These are supported with insights derived from (an attempt to) systematic inquiry.	Has conducted a pre-defined design process and is able to describe the process steps on a higher level of abstraction, e.g. by referring to the activities in the Reflective Transformative Design Process.	Is unable to follow a pre-defined design process and cannot identify the process steps.
	Gathering information continuously and framing the work in objective and subjective knowledge, existing designs and research, and perspectives	Critically selects different sources to support claims in the design process.	Uses scientific sources to support claims and decisions in the design process.	Uses web-based sources to support claims and decisions in the design process.	Does not use sources to support claims and decisions in the design process.
	Executing design process or research methodology (synthesis, analysis and validation)	Follows a recognizable methodology.	Is aware of different methodologies and attempts to use them in the design process.	Follows the methodologies as proposed in the project.	Is unable to execute a pre-defined methodology.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS BACHELOR YEAR 1

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DRP	Analysing and synthesizing	Chooses appropriate methods and tools for analysis/synthesis. Explicitly organizes/creates evidence.	Is aware of different methods and tools for analysis/synthesis and attempts to use them in the design process. Evidence is explicit.	Uses the offered methods and tools for analysis/synthesis in the design process. Most claims are supported by (some) evidence. Evidence is implicit.	Claims are not supported by evidence.
	Defining conclusions and claiming value	States surprising and relevant value claims from the design process/conclusions from the inquiry findings.	States appropriate value claims from the design process/conclusions from the inquiry findings.	States considered value claims from the design process/conclusions from the inquiry findings.	Is unable to define a conclusion or claim value.
	Using a demonstrator/prototype	Has validated the assumption using a demonstrator/prototype. Prototypes were well-designed for their purpose.	Has validated the assumption using a demonstrator/prototype.	Has made a demonstrator/prototype to validate an assumption.	Does not have a demo/prototype or does not understand the relevance of a demo/prototype.
VISION	Envisioning/transforming	Has a vision and this is actively used in design activity.	Has a vision that is related to design activity.	Has a vision but this is not used as an instrument for design.	No awareness

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
BUSINESS & ENTREPRENEURSHIP	Creating propositions integrating design skills, user insights and technology	Based on personal vision and professional identity, can individually create propositions that integrate design skills, user insights and technology. Executes a value creation process with multiple stakeholders that may have conflicting interests.	Can individually create a value proposition and execute a value creation process with a single stakeholder using the appropriate processes, methods and tools under guidance.	Can create a value proposition and execute a value creation process with a single stakeholder using the appropriate processes, methods and tools under guidance.	Is unable to describe their design as a proposition to users.
	Conducting market analysis and identify competition	Selects different methods and tools when conducting market analysis, identifying competitive advantages etc. to support design decision based on group efforts.	Describes and considers different methods and tools when conducting market analysis, identifying competitive advantages etc. to support design decisions based on group efforts.	Can describe methods and tools learned to conduct market analysis, to identify competitor advantages etc. to support design decisions.	Is unaware of market and competition in the design process.
	Identifying and handling risks as inherent part of the design process	Able to identify and handle risks pro-actively.	Able to handle risks during the process.	Can handle risks when identified by others.	Things go wrong unexpectedly; the process is out-of-control. Things "just happen".
	Entrepreneurial attitude	Creative, ingenuous, pro-active and motivated to develop something new, useful, and better than what currently exists. Pursues opportunities beyond readily available resources. Takes external stakeholders along in process. Inspires external stakeholders.	Creative, ingenuous, pro-active and motivated to develop something new, useful, and better than what currently exists. Pursues opportunities beyond readily available resources. Takes external stakeholders along in process.	Creative, ingenuous, pro-active and motivated to develop something new, useful, and better than what currently exists. Pursues opportunities beyond readily available resources.	Reserved, sees problems and only limited opportunities, is reluctant to take action

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
CREATIVITY & AESTHETICS	Using techniques and methodology (idea generation, creativity techniques and use of 1st, 2nd, and 3rd person perspective)	Individually chooses and uses multiple appropriate creativity techniques, tools and methods when generating, selecting and refining ideas. Shows a fluency in adapting techniques, tools and methods to specific needs.	Individually chooses and uses multiple appropriate creativity techniques, tools and methods when generating, selecting and refining ideas.	Chooses and uses the appropriate creativity techniques, tools and methods when generating, selecting and refining ideas.	Does not describe/provides limited/description of creativity techniques. No use and/or inadequate use of creativity techniques. Demonstrates the tendencies take one idea and go with it or has plenty of Ideas but goes nowhere.
	Expressing quality in form, interaction, etc. (trusting the senses, critical attitude towards aesthetics)	Integrated feel, outstanding overall quality.	Integrated feel only + outstanding aspects.	Integrated feel only, minor disappointing aspects.	No integrated feel and/or major flaws.
	Positioning or benchmarking in an academic or historical perspective and using them as sources of inspiration	Thorough academic benchmark, positioning in historical perspective and simple academic benchmark.	Thorough benchmark, positioning in historical perspective and simple academic benchmark.	Performs a benchmark (this is present market), demonstrates awareness of historical perspective and does academic benchmarking.	Is unable to or does not act as defined under sufficient.
	Approaching the creative process (active decision-taking, reflecting in/on action, balancing intuition and knowledge driven and design narrative)	Balance between intuition and knowledge-driven. Narrative for exploration is present. Both a deep and broad exploration (horizontal and vertical) and iterations (non-linear). Individual expression is clearly visible. Thorough and agency.	Balance between intuition and knowledge-driven. Narrative for exploration is present. Both a deep and broad exploration (horizontal and vertical) and iterations (non-linear). Individual expression is clearly visible.	Balance between intuition and knowledge-driven. Narrative for exploration is present. Both a deep and broad exploration (horizontal and vertical) and iterations (non-linear).	Just intuitive or just informed decisions, no narrative, mechanical approach.

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
MATH, DATA & COMPUTING	Using mathematics and computing theory in design applications	Flawlessly and inspirationally applies more than one tool and theory in design applications.	Applies more than one tool and theory in design applications.	Applies at least one tool and theory in design applications.	Does not use mathematics and computing theory in design applications.
	Using statistical theory in the design process.	Individually manages and leads the process of choosing the appropriate methods and tools when conducting a statistical analysis to support design decisions for simplified cases. Is able to generate datasets to a level where they can be used by others/successors.	Individually chooses the appropriate methods and tools when conducting a statistical method to support design decisions for simplified cases. Is able to generate datasets to a level where they can be understood by others.	Is able to generate datasets (acquisition, analytics and representation) that can be used within their own project.	Principles of data acquisition, analytics and representation are not understood to a level where they can be used within their own project.
	Computing skills	Is able to create and document software to a level where it can be used by others/successors.	Is able to create and document software to a level where it can be understood by others.	Is, under guidance, able to create and document software to a level where it can be understood by others.	Cannot communicate the structure of the software realized.
	Attitude	Considers software as a language to communicate their ideas.	Can use code/data also in context as a means to communicate underlying principles.	Can use code/data to document underlying principles.	“Cutting and Pasting” without any underlying understanding of principles involved.

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
TECHNOLOGY & REALIZATION	Software, Electrical and Mechanical Engineering	Makes relevant calculations, provides correct diagrams uses units and dimensions; uses data sheets and demo states.	Makes relevant calculations, provides correct diagrams uses units and dimensions.	Provides correct diagrams and uses units and dimensions.	Informal explanations only, sketchy diagrams only.
	Realization of prototype	Impressive demo. Mechanically robust prototype with multiple sensors/ actuators or complex sensors/ actuators, adaptivity or learning or connectivity. Calculated mechanical construction and clearly considered and specified material.	Meaningful and working demo. Prototype with sensor(s), actuator(s) or connectivity. Motivated material choice and calculated mechanical construction.	Meaningful and working demo. Prototype with sensor(s), actuator(s) or connectivity. Careful software, electrical and mechanical construction and materialization.	Naive and/ or unreliable prototype.
	Feasibility of design	Serious calculations or simulations of complex, adaptive or intelligent aspects and mechanics or material costs. Performance algorithms. Calculated energy consumption.	Specifications supported by calculations or simulations of complex, adaptive or intelligent aspects or mechanics or material costs.	Serious specifications including calculations, cost-estimates and performance. Awareness of energy consumption.	No calculations and/ or informal analysis only.
	Processing information conscientiously	Attention to detail, structured software, careful wiring and construction, clear consideration of material. Clear documentation and aware of imperfections in prototype.	Attention to detail, structured software, careful wiring and construction, clear consideration of material. Some documentation, some imperfections in the prototype (software, wiring, construction, material).	Attention to detail, structured software, careful wiring and construction, clear consideration of material.	Sloppy, messy, no documentation, nothing works.

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
USER & SOCIETY	<p>Approaching design from a user-centred perspective, using methodological collection and analysis of (quantitative and qualitative) data for the purpose of collecting user insights, trends and design evaluation/validation, able to change perspectives</p>	<p>Makes an adequate choice and/or applies methods correctly even for a well-defined problem or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and/or understands limitations of the method. The argumentation is to the point. Is able to analyse ill-defined problems or challenges, chooses and applies appropriate methods to problem that fit their purpose and/or combines existing methods for user-research.</p>	<p>Makes an adequate choice and/or applies methods correctly even for a well-defined problem or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and/or understands limitations of the method. The argumentation is to the point. Is able to analyse the problem or challenge, chooses and applies appropriate methods to problem that fit their purpose and/or combines existing methods for user-research.</p>	<p>Makes an adequate choice and/or applies methods correctly even for a well-defined problem or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and/or understands limitations of the method. The argumentation is to the point.</p>	<p>Is unable to or does not act as defined under sufficient.</p>
	<p>Having theoretical knowledge about user experience and interaction design (perceptual, cognitive, emotional and social as well as developmental aspects); context, culture and trends</p>	<p>Chooses and applies theoretical principles to well-defined problems or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and understands limitations of the method. The argumentation is to the point. Is able to analyse ill-defined problems or challenges, chooses and applies theoretical principles to problem that fit their purpose and/or combines existing methods for user-research.</p>	<p>Chooses and applies theoretical principles to well-defined problems or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and understands limitations of the method. The argumentation is to the point. Is able to analyse the problem or challenge, chooses and applies theoretical principles to problem that fit their purpose and/or combines existing methods for user-research.</p>	<p>Chooses and applies theoretical principles to well-defined problems or challenges and/or provides a coherent description of the process, demonstrates insight by explaining the 'why' and understands limitations of the method. The argumentation is to the point.</p>	<p>Is unable to or does not act as defined under sufficient.</p>

EXPERTISE AREA RUBRICS BACHELOR YEAR 3

Sub-criterion	Excellent	Good	Sufficient	Insufficient
Being empathic, sensitive, respectful, ethical, understanding, curious	Takes initiative to direct attention to the user in their socio-cultural context and aims at creating value/meaningful designs. For ill-defined problems or challenges.	Takes initiative to direct attention to the user in their socio-cultural context and aims at creating value/meaningful designs.	Shows due respect for the user. Controlled application of guidelines.	Is unable to or does not act as defined under sufficient.
Approaching design from a social-cultural context; having hands-on experience with and theoretical knowledge of areas related to societal and economic paradigms, social design, ethics and values	Seriously reflects on the ethical, social and cultural impact using substantiated arguments (e.g. addressing relevant literature). Correctly applies theoretical principles regarding societal and economic paradigms, social design, ethics and values in the design process.	Seriously reflects on the ethical, social and cultural impact using substantiated arguments (e.g. addressing relevant literature). Awareness of theoretical principles regarding societal and economic paradigms, social design, ethics and values in the design process.	Seriously reflects on the ethical, social and cultural impact using substantiated arguments (e.g. addressing relevant literature).	Does not connect the ethical perspective or describes the social/cultural impact of design.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Addressing a societal context for design or design research	Successfully addresses a medium complex case (in a well-defined challenge but open societal context).	Successfully addresses a simplified case (ill-defined challenge and non-obvious target group).	Successfully addresses a simple case (ill-defined challenge and well-defined target group).	Is unable to or does not act as defined under sufficient.
	Addressing design and research challenges	Individually manages and leads the process identifying a creative, focused, and manageable topic that addresses potentially significant yet previously less explored aspects of design research.	Individually identifies a focused and manageable topic that appropriately addresses relevant aspects of the topic.	Needs guidance to identify a manageable/ doable topic for simplified cases. However, the topic is still too narrowly focused and leaves out relevant aspects of the topic.	Is unable to or does not act as defined under sufficient.
	Gathering information continuously and framing the work in objective and subjective knowledge, existing designs and research, and perspectives	Synthesizes in depth information from relevant sources to critically frame the design research/ approach for medium complex cases from various angles and perspectives.	Individually presents in depth information from relevant sources to frame the design research/ approach simplified cases from various angles and perspectives.	Needs guidance to present information from relevant sources that frames the design research/ approach for simplified cases, however from limited angles and perspectives.	Presents little to no information, or from irrelevant sources to properly frame the design research/ approach for simplified cases.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Executing design process or research methodology (synthesis, analysis and validation)	Individually manages and leads the process choosing the appropriate methods and tools when conducting activities to support decisions. All elements of the design process/ research methodology are skill-fully and critically developed.	Individually chooses the appropriate methods and tools when conducting activities to support decisions. Critical elements of the design process/ research methodology are appropriately developed however more subtle elements are ignored or unaccounted for.	Needs guidance to choose the appropriate methods and tools when conducting activities to support decisions. The methodology is recognizable. Critical elements are missing, incorrectly developed or unfocused.	Is unable to or does not act as defined under sufficient.
	Analysing and synthesizing	Individually manages and leads the process of choosing the appropriate methods and tools for analysis/ synthesis of medium complex cases. Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Individually chooses the appropriate methods and tools for analysis/ synthesis of simplified cases. Organizes/ creates evidence to reveal important patterns, differences, or similarities related to focus.	Needs guidance to choose the appropriate methods and tools for analysis/ synthesis of simplified cases. Organizes/ creates evidence but the organization/ creation is not effective in revealing important patterns, differences or similarities.	Is unable to or does not act as defined under sufficient. Lists/ creates evidence but it is not organized and/ or is unrelated to focus.
	Defining conclusions and claiming value	Individually manages and leads the process to stating value claims from the design process/ conclusions. States a claim/ conclusion that is a logical extrapolation from the design process/ inquiry findings.	Individually states a value claim from the design process/ conclusion focused solely on the inquiry findings. The value claim/ conclusion arises specifically from and responds specifically to the design process/inquiry findings.	Needs guidance to state a general value claim from the design process/ conclusion from the inquiry findings that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical or unsupported value claim from the design process/ conclusion from inquiry findings.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS BACHELOR YEAR 3

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Using a demonstrator and/or research prototypes	The demo/research prototype(s) was/ were especially crafted for their specific purpose and roles in the acquisition of knowledge/ creation of value. The prototype(s) also made a strong contribution in itself.	The demo/research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge/creation of value.	The demo/research prototype(s) played a significant role in the acquisition of knowledge/ creation of value.	The demo/research prototype(s) is (are) poorly designed and/ or played a trivial role for the acquisition of knowledge/ creation of value.
	Having the appropriate attitude for design (research)	Showing a consistent attitude in doing, showing and arguing that is specific for the methodology.	There are signs of an interest and attitude that is specific for the methodology.	There are signs of interest in general design research, but the attitude is not specific for the methodology.	There is no sign of a research interest, nor an expressed interest in design.
	Understanding which perspective to choose depending on the phase and type of project	Individually chooses appropriate approach throughout the design process and can motivate the decisions.	Knows which approach to employ based on the moment in the design process.	Needs guidance to choose the appropriate approach in the design process	Is unable to or does not act as defined under sufficient.
VISION	Envisioning/transforming	Vision is instrument for design. Design is seen as a transformational process and responsibility is seen. Transformation is a reality in text and action. Individual agency and related to societal and academic sources.	Vision is instrument for design. Design is seen as a transformational process and responsibility is seen. Transformation is a reality in text and action.	Vision is instrument for design. Design is seen as a transformational process and responsibility is seen.	Has a vision but has only taken effort to use in design. Lip-service to design as transformational power.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
BUSINESS & ENTREPRENEURSHIP	Creating propositions integrating design skills, user insights and technology and describing and designing their financial models.	Creates value propositions while managing, leading and articulating a group's vision. Proposes financial models with multiple stakeholders that may have conflicting interests.	Adapts tools and methods to fit the complexity of a case, based on personal vision and professional identity. Proposes financial models for the different stakeholders.	Creates value propositions based on thorough organization and stakeholder analysis using existing tools and methods. Describes and designs financial models for the value proposition.	Has no methodological approach to create value propositions or proposition is missing and/or is unable to describe the financial model of the value proposition.
	Conducting market analysis and identify competition	Develops tools and methods to fit the complexity of a case, based on personal vision and professional identity.	Adapts tools and methods to fit the complexity of a case, based on personal vision and professional identity.	Conducts market analysis and identifies competition using existing methods and tools.	Does not conduct market analysis and/or identifies competition using methods and tools.
	Identifying and handling risks as inherent part of the process	Maps risks and proposes alternative solutions with diverse risk levels.	Maps possible risks and proposes alternative approaches.	Identifies and handles risks proactively	Has no overview of potential risks and/or is unable to deal with risks.
	Entrepreneurial attitude	Inspiring and enthusiastic. Able to persist and operate despite clearly defined goals and to explore, define, and react to emerging customer's needs. Can easily improvise while creating opportunities. Manages and leads the design process.	Inspiring and enthusiastic. Able to persist and operate despite clearly defined goals and to explore, define, and react to emerging customer's needs. Can easily improvise while creating opportunities.	Inspiring and enthusiastic. Able to persist and operate despite clearly defined goals and to explore, define, and react to emerging customer's needs.	No creativity, ingenuity, proactiveness towards creating opportunities.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
CREATIVITY & AESTHETICS	Using techniques and methodology (idea generation, creativity techniques and use of 1st, 2nd, and 3rd person perspective)	Has a repertoire of techniques and chooses them appropriately. Agency in choosing. Shows agency in appropriately 're-mixing' the existing techniques to fit specific needs.	Has a repertoire of techniques and chooses them appropriately. Agency in choosing.	Has a repertoire of techniques and chooses them appropriately.	Uses only a limited amount of techniques and/or mechanical imperfection in application.
	Expressing quality in form, interaction, etc. (trusting the senses, critical attitude towards aesthetics)	Prototype, design and/or other deliverables have an integrated feel, overall good quality (e.g., good finish, convincing details, decent graphics etc.). Student is able to differentiate between design and prototype. Excellent quality of deliverables (e.g., excellent finish, magnificent details, stunning graphics). Individual handwriting in form and interaction, shows agency in delivering excellent quality.	Prototype, design and/or other deliverables have an integrated feel, overall good quality (e.g., good finish, convincing details, decent graphics etc.). Student is able to differentiate between design and prototype. Excellent quality of deliverables (e.g., excellent finish, magnificent details, stunning graphics).	Prototype, design and/or other deliverables have an integrated feel, overall good quality (e.g., good finish, convincing details, decent graphics etc.). Student is able to differentiate between design and prototype.	Prototype and/or design has a non-integrated feel, many disappointing features. Student has a mechanical attitude.

EXPERTISE AREA RUBRICS MASTER YEAR 2

Sub-criterion	Excellent	Good	Sufficient	Insufficient
Academic positioning of design work in terms of historical perspective and related work, as well as bringing forward those exemplars and theories that ground or inspires design work.	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation). Transformational power of design is acknowledged and incorporated in text and action. Individual agency related to societal and academic sources.	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation). Transformational power of design is acknowledged and incorporated in text and action.	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation).	Has a vision but did not apply it in the design. Provides lip-service to the transformational power of design.
Approaching the creative process (active decision-taking, reflecting in/on action, balancing intuition and knowledge driven and design narrative)	Non-linear approach, iterations are informed by insight. Strong narrative and appropriate prototyping decisions. Very thorough exploration. Individual approach. Agency over process.	Non-linear approach, iterations are informed by insight. Strong narrative and appropriate prototyping decisions. Very thorough exploration.	Non-linear approach, iterations are informed by insight. Strong narrative and appropriate prototyping decisions.	Linear approach, unrelated iterative moves steered by process problems rather than design challenge.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
MATH, DATA & COMPUTING	Using tools and mathematics theory (calculus, geometry, matrix algebra, signal processing) in design applications	Can flawlessly and inspirationally apply more than one tool and theory of different mathematics.	Can apply more than one tool and theory of different mathematics.	Can apply at least one tool and theory of mathematics in design applications.	Is unable to or does not act as defined under sufficient.
	Using data theory (T-test, ANOVA and data-mining and processing) and tools (e.g. SPSS, Excel, R visualization tools) in design applications	Individually manages and leads the process of choosing the appropriate methods and tools when conducting a statistical method to support design decisions for simplified cases.	Individually chooses the appropriate methods and tools when conducting a statistical method to support design decisions for simplified cases.	Needs guidance to choose the appropriate methods and tools when conducting a statistical analysis to support design decisions for simplified cases.	Is unable to or does not act as defined under sufficient.
	Using tools (e.g. code generators, data filters) and computing theory (e.g. data structures, algorithms, object-orientated design, FSMs Petri Nets, learning, optimization, pattern recognition etc., multi-agent simulations) in design applications	Can flawlessly and inspirationally apply more than one tool and computing theory.	Can apply more than one tool and theory.	Can use of the basics of computational modelling (data-structures and algorithms) in design applications.	Is unable to or does not act as defined under sufficient.
	Attitude	Understands the aesthetics of algorithms and applies this in their designs.	Considers software as a language to communicate their ideas. and external parties can flawlessly use it for further development	Considers software as a language to communicate their ideas.	Software works but an external party cannot understand the principles and structure of the algorithms applied

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
TECHNOLOGY & REALIZATION	Software, Electrical and Mechanical Engineering	Relevant calculations, correct diagrams or drawings, correct units and dimensions, awareness of complex sensors and/or actuators. Understanding of PCB design. Uses datasheets, understanding of complex systems and cross-disciplinary cooperation.	Relevant calculations, correct diagrams or drawings, correct units and dimensions, awareness of complex sensors and/or actuators. Understanding of PCB design.	Makes relevant calculations, provides correct diagrams uses units and dimensions; uses datasheets and demo states.	Informal explanation, sketchy diagrams only.
	Realization of prototype	Robust prototype with multiple sensors/ actuators or complex sensors/ actuators, adaptivity or learning or connectivity. Calculated software/ electrical/ mechanical construction and clearly considered and specified material. Reliable (can be deployed in the field for a longitudinal study). Impressive demo. New technology, real innovation as evident from an invitation to show the prototype as is at a key exhibition.	Robust prototype with multiple sensors/ actuators or complex sensors/ actuators, adaptivity or learning or connectivity. Calculated software/ electrical/ mechanical construction and clearly considered and specified material. Reliable (can be deployed in the field for a longitudinal study). Impressive demo.	Robust prototype with multiple sensors/ actuators or complex sensors/ actuators, adaptivity or learning or connectivity. Calculated software/ electrical/ mechanical construction and clearly considered and specified material.	Simple technology only (e.g. sensor = switch) no adaptivity. Mechanically failing prototype.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
TECHNOLOGY & REALIZATION	Feasibility of design	Correct calculations or simulations of complex or adaptive or intelligent aspects and mechanics or material costs. Clearly considered energy efficiency. Non-trivial calculations and/or use of sophisticated tools. Smart energy consumption.	Correct calculations or simulations of complex or adaptive or intelligent aspects and mechanics or material costs. Clearly considered energy efficiency.	Serious calculations or simulations of complex, adaptive or intelligent aspects and mechanics or material costs.	Analysis of non-complex, non-adaptive, non-intelligent aspects.
	Processing information conscientiously	Comprehensive and extended documentation with clear overview of relevant references and appendices. Attention to detail in prototype. Thorough, reproducible and thoughtful integration of software (clearly annotated), electronics (clear diagrams and neatly-wired/soldered), mechanics (technical drawings/documented and durable) and material (considered and responsible).	Comprehensive and extended documentation with clear overview of relevant references and appendices. Attention to detail in prototype.	Clear documentation and aware of imperfections in prototype.	Sloppy, messy, no documentation, nothing works.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
USER & SOCIETY	Approaching design from a user-centred perspective, using methodological collection and analysis of (quantitative and qualitative) data for the purpose of collecting user insights, trends and design evaluation/validation, able to change perspectives	Analyses a problem or challenge; chooses and applies methods that fit their purpose and/or combines existing methods for user-research and evaluation/validation. Provides a coherent description of the process, demonstrates insight by explaining the 'why', understands limitations of the method, the argumentation is to the point. Is able to analyse an ill-defined problem or challenge, chooses and tunes methods that fit their purpose. Creates new methods. Needs no supervision or support. Others come to them for advice.	Analyses a problem or challenge; chooses and applies methods that fit their purpose and/or combines existing methods for user-research and evaluation/validation. Provides a coherent description of the process, demonstrates insight by explaining the 'why', understands limitations of the method, the argumentation is to the point. Is able to analyse an ill-defined problem or challenge, chooses and tunes methods that fit their purpose.	Analyses a problem or challenge; chooses and applies methods that fit their purpose and/or combines existing methods for user-research and evaluation/validation. Provides a coherent description of the process, demonstrates insight by explaining the 'why', understands limitations of the method, the argumentation is to the point.	Is unable to or does not act as defined under sufficient.
	Having theoretical knowledge about user experience and interaction design (perceptual, cognitive, emotional and social as well as developmental aspects); context, culture and trends	Defines the problem or challenge, chooses and applies theoretical principles that fit their purpose. Is able to define and structure a problem or challenge independently, even if it is ill-defined. Generates new theoretical knowledge, as evident from e.g. contributions to conferences or journals.	Defines the problem or challenge, chooses and applies theoretical principles that fit their purpose. Is able to define and structure a problem or challenge independently, even if it is ill-defined.	Defines the problem or challenge, chooses and applies theoretical principles that fit their purpose.	Is unable to or does not act as defined under sufficient.

EXPERTISE AREA RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
USER & SOCIETY	Being empathic, sensitive, respectful, ethical, understanding, curious	Takes initiative to direct attention to the user in their socio-cultural context and aims at creating value/meaningful designs. Proposes a methodological approach. User is an integrated part of the design process and is given due respect.	Takes initiative to direct attention to the user in their socio-cultural context and aims at creating value/meaningful designs. Proposes a methodological approach.	Takes initiative to direct attention to the user in their socio-cultural context and aims at creating value/meaningful designs.	Is unable to or does not act as defined under sufficient.
	Approaching design from a social-cultural context; having hands-on experience with and theoretical knowledge of areas related to societal and economic paradigms, social design, ethics and values	Awareness of the social-cultural context of the design and applies at least one theoretical principle regarding societal and economic paradigms, social design, ethics and values in the design process. Is aware of and can apply one or more of the appropriate theories/frameworks during the design process. Generates new theoretical insights, as evident from e.g. designs, reports, exhibitions, contributions to conferences or journals	Awareness of the social-cultural context of the design and applies at least one theoretical principle regarding societal and economic paradigms, social design, ethics and values in the design process. Is aware of and can apply one or more of the appropriate theories/frameworks during the design process.	Awareness of the social-cultural context of the design and applies at least one theoretical principle regarding societal and economic paradigms, social design, ethics and values in the design process.	No awareness of theoretical principles regarding societal and economic paradigms, social design, ethics and values in the design process.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Addressing a societal context for design or design research	Successfully addresses a highly complex case (ill-defined challenge in an open societal context).	Successfully addresses a complex case (ill-defined challenge in a well-defined societal context).	Successfully addresses a medium complex case (ill-defined challenge in a delimited societal context).	Is unable to or does not act as defined under sufficient.
	Addressing design and research challenges	Individually manages and leads the process identifying a creative, focused, and manageable topic that addresses potentially significant yet previously less explored aspects of design research. Previously not explored aspects of design research that sparks the interest of the community.	Individually manages and leads the process identifying a creative, focused, and manageable topic that addresses potentially significant yet previously less explored aspects of design research.	Individually identifies a focused and manageable topic that appropriately addresses relevant aspects of case.	Is unable to or does not act as defined under sufficient.
	Gathering information continuously and framing the work in objective and subjective knowledge, existing designs and research, and perspectives	Is able to describe the introduction as described under [good] at an academic level, i.e. ready for publication.	Synthesizes in depth information from relevant sources to critically frame the design (research) approach from various angles and perspectives.	Presents in depth information from relevant sources to frame the design (research) approach from various angles and perspectives.	Is unable to or does not act as defined under sufficient.
	Executing design process or research methodology (synthesis, analysis and validation)	Is able to describe the method as described under [good] at an academic level, i.e. ready for publication.	All elements of the design process or research methodology are skillfully and critically developed.	Critical elements of the design process or research methodology are appropriately developed. However, more subtle elements are ignored or unaccounted for.	Is unable to or does not act as defined under sufficient.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
DESIGN & RESEARCH PROCESSES	Analysing and synthesizing	Is able to describe the results as described under [good] at an academic level, i.e. ready for publication.	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Organizes and creates evidence to reveal important patterns, differences, or similarities related to focus.	Is unable to or does not act as defined under sufficient.
	Defining conclusions and claiming value	States a value claim or conclusion that is a surprising extrapolation from the design process or inquiry findings.	States a value claim or conclusion that is a logical extrapolation from the design process or inquiry findings.	States a value claim or conclusion that arises specifically from, and responds specifically to the design process or inquiry findings.	Is unable to or does not act as defined under sufficient.
	Using a demonstrator and/or research prototypes	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value. The prototype(s) make a strong contribution in itself. According to external experts/reviewers.	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value. The prototype(s) make a strong contribution in itself.	The demo or research prototypes were especially crafted for their specific purpose and roles in the acquisition of knowledge or the creation of value.	The demo or research prototypes were not especially crafted for their specific purpose and roles in the acquisition of knowledge or creation of value.
	Having the appropriate attitude for design (research)	Showing a consistent self-directed attitude in doing, showing and arguing that is specific for the methodology.	Showing a consistent attitude in doing, showing and arguing that is specific for the methodology.	There are signs of an interest and attitude that is specific for the methodology.	There are no signs of an interest and attitude that is specific for the methodology.
	Understanding which approach (creative, engineering, user-centred, analytic) to choose depending on the phase and type of project	Naturally shifts between approaches and addresses all expertise perspectives in the design process, convincingly motivates all decisions.	Individually chooses appropriate approach throughout the design process and can motivate the decisions.	Knows which approach to employ based on the moment in the design process.	Is unable to or does not act as defined under sufficient.

DESIGN & RESEARCH PROCESSES + VISION RUBRICS MASTER YEAR 2

	Sub-criterion	Excellent	Good	Sufficient	Insufficient
VISION	Envisioning/transforming	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation). Transformation is a reality in text and action. Individual agency related to societal and academic sources.	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation). Transformation is a reality in text and action.	Use of vision as an instrument for design. Design is seen as a transformational process and responsibility (for guiding societal transformation).	Has a vision but has not taken the effort to use it in their designs. Provides lip-service to the transformational power of design.