

ASSESSMENT PROTOCOL EXTERNAL INTERNSHIP MSC AP (version September 2024)

This protocol replaces the protocol External Internship MSc AP 2023-2024 for students starting their EI on or after September 1, 2024.

The assessment of an External Internship Applied Physics (AP) comprises the following aspects:

- (1) **Project duration:** regulations regarding the duration and finalization of the internship
- (2) **Assessment committee, report & presentation:** committee composition, report/presentation details
- (3) **Assessment procedure & rubrics, assessment form:** determination and communication of the grades
- (4) **Double diploma protocol:** differences in assessment rules regarding double (or more) diploma students

1. Project duration. On the External Internship registration form, the student, after discussion with the 1st TU/e examiner (also responsible AP supervisor) fills in the agreed end date, based on 420 hours (15EC) / 840 hours (30EC), and the extended end date, that is the agreed end date + allowed extra time, based on adding 160 hours (equivalent to 4 full-time working weeks). For both dates (public) holidays should be considered. If by the agreed end date including allowed extra time the pass criteria are not satisfied (see 3. *Assessment procedure & rubrics*) or the report and/or presentation are not delivered, the student receives the final grade “Not met requirements” (NMR) – in Dutch: “Niet voldaan” (NVD). This grade will be communicated to CSA by the 1st TU/e examiner and will be administered in Osiris. The student has the opportunity for a retake, for a limited time of 160 hours (15EC, equivalent to 4 full-time working weeks) or 240 hours (30EC, equivalent to 6 full-time working weeks). If by the end date of the retake the pass criteria are still not fulfilled or the report and/or presentation are not delivered, the student fails the External Internship (NMR). In general, a new project should be started. If special circumstances play a role, a customized route should be followed. See the [study guide](#) for more information.

2. Assessment committee, report & presentation. The External Internship is assessed by the 1st TU/e examiner in consultation with the external supervisor. The external supervisor is the supervisor from the company, research institute or university at which the student carried out the External Internship. The 1st TU/e examiner must have informed the external supervisor about the assessment procedures and rubrics before the start of the internship. In case of a 15EC internship, the presentation is also assessed by the 2nd TU/e examiner, which must be at least an assistant professor. In case of a 30EC internship, the report is assessed by this 2nd TU/e examiner too. The student sends the final report at least 5 working days before the presentation to the 1st TU/e examiner, 2nd TU/e examiner in case of 30EC internship, and external supervisor. The student delivers a presentation of approximately 20 minutes, followed by a discussion of typically 10 minutes where at least both the 1st TU/e examiner and 2nd TU/e examiner are present.

3. Assessment procedure & rubrics. The assessment has 3 components, (A) Report (30%), (B) Presentation (20%), (C) Implementation of the work itself (50%). Before the presentation takes place, the grade for the Report (A) is determined by the 1st TU/e examiner, in consultation with the external supervisor, and for a 30EC internship, also by the 2nd TU/e examiner. Also before the presentation takes place, the grade for the Implementation of the work itself (C) is determined by the 1st TU/e examiner, in consultation with the external supervisor. The advice of the external supervisor on component (A) and (C) should be based on the criteria in the rubrics in the appendix. The 1st TU/e examiner and 2nd TU/e examiner both grade the Presentation (B). After the presentation, the 1st TU/e examiner and 2nd TU/e examiner discuss and determine the grade(s). The 1st TU/e examiner explains and motivates the grades to the student, if possible, immediately after the presentation. The grades for the 3 components are decided on a scale of 0 to 10, in 1 decimal (or less). The final grade is the weighted average, rounded to the nearest 1/2 grade. When rounding is ambiguous, the 1st TU/e examiner decides. The student passes when the final grade of the External Internship is ≥ 6.0 , and all 3 components are at least graded with a 6.0.

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Assessment form. The grades of the 3 components and final grade should be registered on the assessment form. The 1st TU/e examiner includes an elaborate written motivation per component based on the discussions with the 2nd TU/e examiner and external supervisor. In case the final grade is 6.0 or 10.0, a separate motivation should be given. The 1st TU/e examiner sends the report and the completed assessment form including a motivation to the student, 2nd TU/e examiner, external supervisor, and CSA no later than 5 working days after the presentation.

The grades will be processed by CSA in Osiris. If the student does not meet the requirements for passing (see above), the student fails the External Internship and the same procedure as described before (sending completed assessment form to CSA, student and 2nd examiner, grades in Osiris) applies. The student will enter a retake procedure (see above).

4. Double diploma protocol. If both degree programs require an internship there are three possibilities: to do (1) a single internship from either one of the programs, (2) two separate internships or (3) a combined internship (specially designed, with a study load according to the PERs). In all three cases, the assessment completely follows the assessment protocol(s) of the corresponding degree program(s). Always check the other degree program's regulations as well. For more information, see [education guide](#), [AP PER](#) Appendix 5 and 6 or contact the programs' academic advisors.

ASSESSMENT FORM EXTERNAL INTERNSHIP MSc AP (version September 2024)

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1. Surname student + initials:
2. Student ID number:
3. Date of assessment (presentation date):
4. Start date External Internship:
5. Expected end date (as indicated on the registration form):
6. Expected end date including allowed extra time:
7. Course code and corresponding study load:
8. Name of Masters' program, track:
9. Title report:
10. Responsible AP supervisor, also 1st TU/e examiner, cap. group:
11. External supervisor, institution:
12. Second TU/e examiner, cap. group:
13. Grades (components in 1 decimal, final grade 1/2 integer):

Report (30%)	Presentation (20%)	Implementation (50%)	FINAL GRADE*

* If one or more of the 3 components (Report, Presentation, Implementation) are graded <6.0, the final grade will be "NMR".

14. Additional requirements:

Motivation 3 components included on separate sheets (approximately 5 sentences / component); optional additional motivation for final grade (compulsory when final grade is 6.0 or 10.0)

All components ≥ 6.0

15 EC: Presentation is assessed by 2nd TU/e examiner; 30 EC: Report & Presentation assessed by 2nd TU/e examiner

Fraud and plagiarism check on report has been conducted (1st TU/e examiner is responsible) via [Ouriginal](#) or manually in case of confidential report

Confidentiality (see [study guide Internship](#) for more information)

Report and completed assessment form + motivation (pdf) sent by 1st TU/e examiner to CSA, student, 2nd TU/e examiner and external supervisor no later than 5 working days after the presentation.

Signature of the 1st TU/e examiner

Date of Signature

Signature of the 2nd TU/e examiner

Date of Signature

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To be filled in by the 1st TU/e examiner. Feedback of the 2nd TU/e examiner on the component(s) “Presentation” (15 EC) or “Presentation” and “Report” (30 EC) is incorporated. Motivation on the 3 components included (approximately 5 sentences / component). Additional motivation for final grade is compulsory when final grade is 6.0 or 10.0.

Feedback on Report (30%)

Feedback on Presentation (20%)

Feedback on Implementation of the work itself (50%)

Additional motivation (compulsory for final grade 6.0 or 10.0)

APPENDIX 1. RUBRICS EXTERNAL INTERNSHIP MSC AP

A. REPORT (30%) <i>All at level 1 = 4, 2 = 6, 3 = 8, 4 = 10</i>	Level 1 – Insufficient (4)	Level 2 – Sufficient (6)	Level 3 – Good (8) Criteria on top of level 2	Level 4 – Excellent (10) Criteria on top of Level 3
1a. Introduction of research question and methods	Student is not able to meet level 2 requirements.	A basic overview of the current state of knowledge leads to a valid research question in a logical fashion.	A comprehensive overview of the state of knowledge is provided, which leads naturally to a valid research question with anticipated answers.	A complete, concise overview of relevant state-of-the-art research is provided.
		The used methods and analyses are sufficiently described.	The information about the methodology, research and/or design is set-up in such a way that replication of the study is possible.	Original/creative analyses and research methods are proposed and applied by the student.
1b. Results & conclusion(s)	Student is not able to meet level 2 requirements.	The text contains plausible and valid interpretations of the data, measurements or models/calculations, leading to answers to the research questions, hypotheses.	Clear links to the research questions and/or hypotheses, including the introduction, are made.	Results are put into a broad perspective, with unresolved and/or new arisen problems that should be further examined.
		Results and analysis of data are shown via formulas, figures and tables to support the discussed and explained results of the research.	Student structures and handles results/data logically and carefully, and critically confronts research results to existing literature.	The full analysis of all data and results is perfectly documented and creatively illustrated, clearly and critically referring to earlier work and current developments.
		The conclusions are logically substantiated by the results and are clearly formulated.	In the conclusions and outlook, the student identifies the impact of the research and its societal impact.	The student is able to extensively describe the broad scientific and societal implications, including limitations of the research, taking into account strengths and weaknesses.
1c. Structure, style	Student is not able to meet level 2 requirements.	The report is organized.	The report is logically connected and organized to the reader, with a functional layout and data presentation.	The report is well-structured with an excellent overall layout: the reader can identify the clear and unique function of each section.
		Language is precise and correct.	Language is concise and the student uses logical argumentation.	Language is precise, correct, and on excellent scientific level.

B. PRESENTATION (20%) <i>All at level 1 = 4, 2 = 6, 3 = 8, 4 = 10</i>	Level 1 – Insufficient (4)	Level 2 – Sufficient (6)	Level 3 – Good (8) Criteria on top of Level 2	Level 4 – Excellent (10) Criteria on top of Level 3
2a. Content and structure	Student is not able to meet level 2 requirements.	The student introduces the content and purpose of the research project.	The student introduces and explains the research content and purpose of the research project in a logical way, such that the relevance/motivation of the project is a natural extension.	The opening, introduction and actual motivation of the presentation contain unique, exceptionally strong and creative elements.
		The student points out the relevance of the research project.	The student provides an accurate and complete explanation of key concepts and theories.	The student points out and explains the strengths and weaknesses of (the outcomes) of the research projects.
		The student delivers a structured presentation in a logical sequence.	The student provides a well-structured and organized presentation and is able to limit the presentation to the essential elements for addressing the key results.	The student provides a consistent narrative structure supported by clear, scientifically accurate and concise explanations.
2b. Performance	Student is not able to meet level 2 requirements.	The level of the presentation fits the target audience, viz. the group members at the research group at TU/e.	The student manages to keep the overall attention of the targeted audience.	The student keeps the targeted audience continuously engaged and involved.
		The used visual aids help the audience to follow the storyline.	The student uses visual aids that accurately support the message (e.g. key words on slides, strong visualizations, no abundant information).	Visual aids that captivate the audience are carefully and successfully applied throughout the presentation.
		The personal performance of the student sufficiently helps the audience to appreciate the outcome of the project.	The student appears comfortable and has a professional and engaging presentation style.	The student appears fully confident while presenting, with a presentation style that strongly adds to the liveliness and impact of the presentation.

C. IMPLEMENTATION OF THE WORK ITSELF (50%) <i>All at level 1 = 4, 2 = 6, 3 = 8, 4 = 10</i>	Level 1 – Insufficient (4)	Level 2 – Sufficient (6)	Level 3 – Good (8) Criteria on top of Level 2	Level 4 – Excellent (10) Criteria on top of Level 3
3a. Scientific independence and creativity (15/30 EC)	Student is not able to meet level 2 requirements.	The student has a hesitant attitude towards the research process.	The student has the correct, critical attitude towards most of the findings within the project.	The student has the correct, critical attitude towards the findings within the project, and the feedback of the supervisor.
		15 EC: Student has fulfilled the basic parts of the project to finish the assignment. 30 EC: Student has put the extra time (15EC) to good use to have a self-initiated contribution to the project.	15 EC: Part of the work can be identified to originate from the student's creative ideas. 30 EC: The direction of the research is augmented/guided by insights of the student.	15 EC: The student has contributed significantly to choosing the direction of the research. 30 EC: The student is in the lead in choosing the direction of the research.
3b. Planning, communication and teamwork	Student is not able to meet level 2 requirements.	Student needs direction in project planning but is able to make progress once guided. The student is basically able to follow the agreed planning. Interim goals are partially met.	Student plans ahead in the project and manages to meet short-term goals and deliver interim products. The student is able to stick to the project planning and timing.	The student is actively planning important milestones during the project and sets individual goals, monitors, regulates and controls the process of carrying out the project.
		The student is not proactive in communicating the progress.	The student communicates the progress of the project work and reflects on individual ideas within the working environment.	The student communicates the progress of the work and reflects on the individual ideas within the working environment. Seeks input when needed.
		The student is coping with teamwork or adapting to the environment at the place of work.	The student works well within the new working environment as a team player.	The student is proactive in the new working environment, seeks resources and feedback when needed, uses teamwork to achieve superior results.
3c. Impact and extent of the work	Student is not able to meet level 2 requirements.	15/30 EC: The progress in this project is a small incremental step for the supervisor.	15 EC: The progress is an incremental step for the supervisor. 30 EC: The project entails progress in the field.	15 EC: like 30 EC level 3 30 EC: The project entails significant progress in the field.