MSc Applied Physics
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MSc Sustainable Energy Technology
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UNIVERSITY OF TWENTE.

MASTER'S ASSIGNMENT DOUBLE PROGRAMME AP & SET

Assessment form *(can be filled in digital)*

Name student | Student number

Research group | Cohort | Date of presentation

Title thesis

☐ *The report has been checked for plagiarism by the student.*

Grade Scientific Aspects, code 202300344 EC Cum Laude M-AP ☐

Grade General Aspect, code 202300343 EC Cum Laude M-SET ☐

How to use this form
On page 4 you find the general information and course information. On page 5 you find the assessment plan. Please read this before the assessment. On page 2 and 3 you will find the tables in which you indicate the strengths and/or the points for improvement for each subject. Subsequently fill in the two grades on page 1. And if applicable, that the master's degree was awarded with "cum laude".
After filling in the form, it has to be signed by the members of the master's final project committee. When digitally signed, after each digital signature the form will be saved. After that, the next one can sign. Make or save a copy for the student and the research chair and send the assessment form to the office of Education Affairs: BOZ-SET, BOZ-SET@utwente.nl and BOZ-AP, BOZ-AP@utwente.nl

Master's Assignment Committee

	Titles and name	Affiliation	Signature[1]
Chair			
Daily supervisor			
Reference member[2]			
External advisor			
member (optional)			
member (optional)			

[1] *Link to: How to Create a digital signature*

[2] *A member of a chair in the discipline Applied Physics other than the research department in which the final project is carried out.*

Scientifical aspects of assessment

	Comments and feedback
Research plan and positioning	Strong points
	Points for improvement
Theoretical & experimental skills	Strong points
	Points for improvement
Analysing skills	Strong points
	Points for improvement
Scientific approach and handling of complexity	Strong points
	Points for improvement
Integration Mathematical and Physical Aspects	Strong points
	Points for improvement
Integration socio-economic perspective	Strong points
	Points for improvement

General Aspects Grade

	Comments and feedback
Reporting	Strong points
	Points for improvement
Oral presentation	Strong points
	Points for improvement
Defence	Strong points
	Points for improvement
Professional communication & attitude	Strong points
	Points for improvement
Arrangement of own work within conditions of research group	Strong points
	Points for improvement

Course information and assessment plan

General information

Lecturers (chair of the MAC is examiner/coordinator):	The Master's Assignment Committee (MAC) is responsible for the supervision and assessment. The committee consists of a minimum of three members, that all have a PhD degree. The composition of the MAC must comply with the rules that apply to both the Applied Physics and Sustainable Energy Technology programme.
Determining pass mark:	In the assessment of the MSc assignment, two grades will be determined: (i) One grade covers the quality of the scientific, physical and Sustainable Energy Technology aspects and the research performance, (ii) One grade covers the other objectives, concerning the oral and written reporting as well as other general aspects of the research. Each grade is a separate study unit with a own course code. The assignment can only be finalized when both grades are six (6) or higher.

Course Description

Course objectives

The main objective of the assignment is that the student learns and proves that (the student is able to define, perform, complete and reflect on a research project in the applied physics and sustainable energy technology domain with a large degree of independence.
In the master's assignment, the objectives of the Applied Physics and the Sustainable Energy Technology programmes are met, which focuses on acquiring most of the learning outcomes of the complete programme;

- a thorough knowledge of the appleid physics and sustainable energy technology theories,
- a more in-depth knowledge of one or more sub-areas of physics and sustainable energy technology,
- knowledge of physical and bsustainable energy technology, including skill in designing and applying measuring equipment and experimental techniques,
- orientation in the application areas of applied physics and sustainable energy technology,
- insight into how the sciences are interconnected and the relation between science and society and the resulting responsibilities,
- skills such as being able to acquire knowledge independently; being able to contribute creatively and systematically to solving issues relating to the subject area; being able to work with colleagues,
- in and outside the discipline; and communicative, social and organizational skills.
- Is able to reflect on the contextual aspects of the research (social context, safety and environmental consequences, scientific and ethical aspects

General aspects that will be assessed include;

- Reporting,
- Oral presentation
- Defence,
- Professional research attitude,
  Professional communication,
- Arrangement of own work within conditions of the research group.

Course Content

The individual master's assignment comprises the completion of the double master programme Applied Physics and Sustainable Energy Technology. The assignment is performed in one of the research groups within the Applied Physics or Sustainable Energy Technology domain of the University of Twente under the supervision of a researcher with a PhD degree and the responsibility of a master's assignment committee.
The assignment can be performed (partially) within a research group outside the domain of Applied Physics and/or Sustainable Energy Technology or an external institute or organization. This needs the approval of the master's examination boards of Applied Physics and Sustainable Energy Technology.
The student has to perform a substantial research or design project that meets scientific criteria. The level of profundity and complexity is defined by the chair of the Master's Assignment Committee. The student completes the assignment with a written report (the MSc thesis) and a public oral presentation and defence.

Assessment plan scientific aspects

Learning objectives After following the course, the student is able to perform scientific research in the field of Applied Physics and Sustainable Energy Technology.	**Way of assessment**	**Level**	**Weight**
1a. Is able to formulate an interpretation a research problem and to define the research goals 1b. Is able to define the theoretical and experimental research plan and position the research in the field.	Meeting MAC Report & presentation	Complex research subject at master level	~10%
2. Has the theoretical and experimental skills to execute the research, works systematically and makes well founded choices. Is able to recognize flaws in theory and has the skills to acquire missing parts.	Observation by supervisor Report & Presentation		~30%
3. Is able to analyse the results, draw conclusions and to reflect on the results with respect to the problem definition and research goals.	Observation by supervisor Report & Presentation		~30%
4. Has a scientific approach and possesses intellectual skills (can handle complexity)	Observation by supervisor Report &		~20%
5. Is able to reflect on the contextual aspects of the research (social context, safety and environmental consequences, scientific and ethical aspects)	Report, Meeting MAC Publication (if applicable)		~10%

Assessment plan reporting & general aspects

Learning objectives After following the course, the student is able:	Way of assessment	Level	Weight
1. Is able to report adequately about the research in English. (report is well structured in clear and correct language)	Report	Report sufficient	~25%
2. Is able to present and to discuss adequately about the research in English (presentation is well structured, with a clear explanation, supported by tools)	Presentation	Presen-tation for staff	~25%
3. Is able to work with a high degree of independence, creativity, dedication, pace, commitment (the student himself is responsible for the progress, planning and consultation of his supervisors)	Observation by supervisor and MAC members	Profes-sional attitude	~20%
4. Is able to communicate professionally with the supervisor (problem owner), to co-operate with the members of the research group and to communicate with others from inside and outside the community of Sustainable Energy Technology and Applied Physics.	Observation by supervisor and MAC members		~15%
5. Is able to arrange his research within the conditions set by the group.			~15%