

Assessment Rubric MSc Research projects Physics Leiden University

	<6	6-6,5	7-7,5	8-8,5	9-10
	insufficient	sufficient	good	very good	excellent
Research Quality					
Knowledge and Understanding: 1. Direct Research Context 2. Literature Review 3. Broader Scientific Framework.	1. Clear gaps in knowledge; 2. No depth/no use of earlier academic materials; 3. Unclear and inadequately explained.	1. Marginal knowledge with one/two deficiencies; 2. Limited depth and use of earlier academic materials; 3. Comprehension not beyond physics problem at hand.	1. Sufficient knowledge for project; 2. Adequate depth and use of earlier academic materials; 3. Sound understanding, able to discuss project scientifically.	1. Thorough understanding and critical attitude to information; 2. Use of new literature beyond provided; 3. Goes beyond the minimal parameters of the project.	1. Intimate understanding of the material; 2. Regularly contributes new literature; 3. Capitalizes on early results to push the project beyond original plan.
Research Skills: 1. Preparation; methodology; structured approach 2. Experimental & Analytical Skills	1. Unable to complete without intervention; failure to follow correct procedures; 2. Very limited research skills.	1. Able to complete research project under supervision; 2. Limited creativity; could improve on research skills.	1. Reliable forward thinking towards project goals; 2. Creative.	1. Fast, reliable, project oriented thinking with minimal supervision; 2. Innovative.	1. Essentially fully independently performed high level research; 2. Innovative to original.
Scientific Quality of Work: 1. Quality and reliability, including record keeping and reporting. 2. Critical Attitude, dependability	1. The obtained results are unreliable; 2. Did not verify or extend knowledge, data, or methods of group.	1. The obtained results are marginally reliable; 2. Verified or extended existing knowledge, data or methods available in group to some degree.	1. The results are acceptable, but not for publication; 2. Extended existing knowledge, data or methods available in group.	1. Resulting data or theory can be a useful starting point for publication; 2. Produced new methods, insights or understanding for group.	1. Quality results that can be used for publication directly. 2. Reliable data generated independently; contribution of original methods, insights or understanding.
Learning Process					
Professional skills: 1. Independence, Initiative, 2. Response to feedback, Communication & Collaboration	1. Unable to work independently; 2. Unable to incorporate feedback or collaborate.	1. To some extent able to work independently and 2. incorporate feedback.	1. Expected level of independence; 2. Incorporates feedback and adapts practices; collaborates smoothly	1. Mostly independent; demonstrates significant initiative; 2. Coherent response to feedback and a good team player.	1. Nearly fully independent; 2. Professional response to feedback and full collaborator.
Management Skills: 1. Productivity 2. Planning, Project and Time management;	1. Productivity is very low; passive attitude; 2. Poor time management; thesis not ready in time.	1. Minimal expected productivity; marginal commitment. 2. Has trouble keeping deadlines; thesis just on time or minimally delayed.	1. Adequate productivity; positive attitude; 2. Able to plan ahead and account for contingency, keeps to agreed milestones.	1. Better than average productivity. 2. Is able to revise planning as needed and keeps to agreed deadlines; focus on well-prioritized tasks without losing the plot.	1. Outstanding productivity; 2. Professional approach; all steps towards completing thesis essentially on time.
Communication and Reports					
Thesis writing: 1. Clarity, Style, Structure, 2. Contextualization, Insight.	1. Unclear, poor structure, non-academic level writing. 2. None	1. Comprehensible level of writing; readable and consistent; proper use of technical language and presentation of data. 2. Provides scientific context.	1. Clear scientific writing, well substantiated. Coherent thought out structure; 2. Provides scientific context and places it appropriately in relation to existing literature.	1. Professional report with clear arguments; minor help from supervisor; coherent well thought out structure, 2. Scientific context includes comprehensive literature references	1. Publication quality with minimal input from supervisor; coherent, well thought-out structure, 2. Extensive literature references & future directions.
Oral presentation 1. Contextualization and delivery at appropriate academic level. 2. Clarity, Style, Structure, 3. Handling questions	1. Vague and unclear to the audience; 2. Slides illegible or do not support storyline. 3. Inadequate response to questions.	1. Supervisors and experts in the field can follow; Cannot place in the broader picture. 2. Minimal structure and storyline. 3. Barely handles basic questions.	1. Able to explain to most fellow students; places work in broader context. 2. Good storyline supported with appropriate slides. 3. Handles expected questions well. No major pitfalls.	1. Fellow students are able to restate the essence. 2. Clear presentation including details, without going off-topic; 3. Good answers on questions and discussions.	1. Professional presentation that gets the message across; 2. Slides in 1-to-1 correspondence with storyline; 3. Knowledgeable answers that show mastery of subject.