

## ASSESMENT FORM BACHELOR RESEARCH PROJECT ASTRONOMY



STUDENTDATA						
Student name						
Student number						
RESEARCH PROJECT						
Start date	End date (report submitted)					
Title						
Supervisor						
Copy front page attached?						
Summary attached?						
PLAGIARISM						
% similarity						
Acceptable?						
ASSESSMENT						
Use rubric (page 2): fill out and attach Date						
Grade Research Quality and Learning Process:	18 EC	Grading is by a number between 1 and 10; Half integers are also permitted with the exception of 5.5.				
Grade Report:	3 EC					
Grade Oral Presentation:	1 EC					
Provide feedback and explain the assessment (obligatory):						

AGREEMENT Name Signature

Supervisor (Research, Report, Presentation):

Second examiner (Report, Presentation):

Tweede lezer

Instructions for digital signatures can be found here.

## TO DO

The supervisor submits this form + the assessment rubric (page 2) to the <u>student</u> and to <u>bachelor@strw.leidenuniv.nl</u>. Please do so no later than **7 July 2023**. The student needs a copy of this form for their own administration.



## Assessment Rubric BSc Research projects Physics and Astronomy Leiden University



Leiden Institute of Physics	Insufficient (<6)	Sufficient (6-6.5)	Good (7-7.5)	Very Good (8-8.5)	Excellent (9-10)
Research Quality	111041110110110 (10)		4004 (* 7.5)	1019 4004 (0 0.0)	Zirociro (v. 13)
Scientific Knowledge: 1. Direct Research Context 2. Literature Review 3. Broader Scientific Framework.	<ol> <li>Clear gaps in knowledge;</li> <li>No depth/no use of earlier academic materials;</li> <li>Unclear and inadequately explained.</li> </ol>	<ol> <li>Marginal knowledge with one/two deficiencies;</li> <li>Limited depth and use of earlier academic materials;</li> <li>Comprehension not beyond physics problem at hand.</li> </ol>	<ol> <li>Sufficient knowledge for project;</li> <li>Adequate depth and use of earlier academic materials;</li> <li>Sound understanding, able to discuss project scientifically.</li> </ol>	<ol> <li>Thorough understanding and critical attitude to information;</li> <li>Use of new literature beyond provided;</li> <li>Goes beyond the minimal parameters of the project.</li> </ol>	<ol> <li>Intimate understanding of the material;</li> <li>Regularly contributes new literature;</li> <li>Full awareness of broader relevance.</li> </ol>
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.	<ol> <li>Able to complete research project with difficulty/under supervision;</li> <li>Limited creativity; long time to learn new research skills, and can still improve.</li> </ol>	<ol> <li>Reliable forward thinking towards project goals;</li> <li>Able to learn new skills adequately. Making decisions on her/his own was difficult.</li> </ol>	<ol> <li>Fast, reliable, project oriented thinking with minimal supervision;</li> <li>Innovative.</li> </ol>	<ol> <li>Essentially fully independently performed high level research;</li> <li>Innovative. Connections beyond original boundaries.</li> </ol>
Scientific Quality of Work:  1. Quality and reliability, including record keeping and reporting.  2. Critical Attitude, dependability	1. Level/quality did not supersede that of simple practicals; 2. Did not verify or extend knowledge, data, or methods of group.	Level/quality are  ± • a some results may not withstand a more thorough analysis.  Modest contribution to knowledge, data or methods already available in group.	1. The results are acceptable, but not for publication; 2. Extended existing knowledge, data or methods available in group.	Resulting data or theory can  ; a useful starting point for publication; Fulfilled most of the potential of research project. 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. Communication inefficient.	1. Detailed instructions required, though to some extent able to work independently. 2. Incorporates feedback.	<ol> <li>Expected level of independence;</li> <li>Generally asked advice and approached supervisor to discuss research.</li> </ol>	<ol> <li>Mostly independent; demonstrates significant initiative;</li> <li>Asked relevant and innovative questions during meetings.</li> </ol>	1. Nearly fully independent; 2. Beyond "very good", e.g. asked advice with others. Full collaborator outside normal scope.
Management Skills: 1. Productivity 2. Planning, Project and Time management;	Productivity very low; ¬š¯sive attitude; cuts corners. Periods of absence without reason. Poor time management; thesis not in time	<ol> <li>Completed project with minimal effort; marginal commitment.</li> <li>Time spent barely sufficient; trouble keeping deadlines; thesis just on time.</li> </ol>	<ol> <li>Adequate productivity; positive attitude;</li> <li>Able to plan ahead and account for contingency, keeps to agreed milestones.</li> </ol>	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.	<ol> <li>Outstanding productivity;</li> <li>Professional approach; all steps towards completing thesis essentially on time.</li> </ol>
Report and Communication					
Thesis writing: 1. Structure, Clarity, Style 2. Description of problem/methods 3. Results and Discussion/Contextualisation.	<ol> <li>Unclear, poor structure, non-academic level writing. Key figures missing/unclear.</li> <li>Problem/hypothesis not defined. Essential details missing.</li> <li>Poor use of literature.</li> </ol>	1. Comprehensible writing; readable and consistent; proper use of technical language/data presentation. 2. Problem/method poorly defined/described. Too many/few details. 3. Results presented without coherence. Missing literature.	<ol> <li>Clear scientific writing, well substantiated. Coherent thought out structure; good figures;</li> <li>Methods appropriately described. Possible for others to repeat experiment.</li> <li>Provides scientific context and places it appropriately in relation to existing literature.</li> </ol>	Clearly written report with clear arguments; minor help from supervisor; coherent well thought out structure,     Sharply defined hypothesis.     Methods well described. All info available     Scientific context includes comprehensive literature references	1. Publication quality with minimal input from supervisor; coherent, well thought-out structure, 2. Clear and concise. 3. Excellent placement in broader research area. Extensive literature references & future directions.
Oral presentation 1. Contextualization and delivery at appropriate academic level. 2. Clarity, Style, Structure, 3. Handling questions	<ol> <li>Vague and unclear to the audience;</li> <li>Slides illegible or do not support storyline.</li> <li>Inadequate response.</li> </ol>	<ol> <li>Only experts can follow;</li> <li>Not placed in broader picture.</li> <li>Minimal structure and storyline.</li> <li>Just handles questions.</li> </ol>	<ol> <li>Fellow students can understand; placed in context.</li> <li>Good storyline supported with appropriate slides.</li> <li>Handles questions acceptably.</li> </ol>	<ol> <li>Fellow students are able to restate the essence.</li> <li>Clear presentation including details, without going off-topic;</li> <li>Good answers w. discussions.</li> </ol>	<ol> <li>Professional presentation that gets the message across;</li> <li>Slides 1-to-1 with storyline;</li> <li>Knowledgeable answers that show mastery of subject.</li> </ol>