

Assessment Matrix for Master's Theses – Department of Physics

Assessment item	Excellent (5)	Good (3)	Sufficient(1)
Guideline for determining the grade	The grade is excellent if all the criteria are met (logical conjunction; the word "and" is presumed between all the criteria for given assessment item)	The grade is good if the criteria are met in the main part (the word "and" is presumed between most of the criteria for given assessment item)	The grade is pass if the criteria are met even partly (logical disjunction; the word "or" is presumed between the criteria or a given assessment item)
Research assignment <ul style="list-style-type: none"> introduction, focus research objectives, motivation research questions 	The research objectives are focused and presented very clearly. The work is seamlessly and expertly connected with field-specific literature and earlier research. The research assignment is very ambitious and challenging.	The objectives are presented well, and they are justified by connecting them to field-specific literature and earlier research. The research assignment is ambitious.	The research assignment is recognizable but unclear. The research questions are unclear, irrelevant, or the focus of the research is obscure. The need for the research is not recognizable. The research assignment is either modest and straightforward or extravagant and overtly challenging.
Conducting the research (Often an important item; evaluate the practical conducting of the research, not the text) <ul style="list-style-type: none"> expertise in the theme mastery of methods and theories reliability of the results 	The research is conducted using suitable, diverse, and new methods and theories, whose principles and practical applications are thoroughly examined. Technical execution conveys professional expertise in methodology. The results are reliable, and the research appears straightforwardly repeatable.	The information, methods, and theories within the field are applied well and the research questions get answered. The execution is overall successful but may contain some individual flaws, inconsistencies, or unfinished items. The research is repeatable in the central parts.	The research assignment has been understood and the execution has been finished. The topic has been familiarized with but only in outline. The use of methods or theories is incomplete or erroneous. The research questions are answered only superficially. The results appear unreliable and difficult to repeat.
Analyzing results <ul style="list-style-type: none"> analyzing and presenting the results discussions, interpretations conclusions 	The results are analyzed systematically, and their reliability is assessed critically and convincingly. The conclusions align perfectly with the results. The findings are tied to previous research and are analyzed comprehensively and diversely. The discussion is diverse and well-argued.	The results are processed systematically. The results are tied with existing research, but the ties could be stronger. The results are understood and processed in the technical context, but the context of the discussion could be wider.	The results are recognizable, but they are presented in list-like form and their analysis is clumsy. Discussion, interpretation, and evaluation of results are fundamentally insufficient. The conclusions are lacking or badly justified. There are flaws in deductions. The significance of results is either under- or overestimated.
Quality of the text (Often an important assessment item) <ul style="list-style-type: none"> coherence, clarity cohesion, connectivity, fluency flawlessness 	The text is fluent, and the narrative is a pleasure to read. The text proceeds logically and seamlessly. The theme is presented very clearly, fluently, and understandably. The language is flawless.	The text is fluent and easy to read. The topics are presented clearly and logically, even if at times there is room for improvements in coherence and comprehensibility. The language is good and mostly flawless.	The pivotal subject matter is presented in the text. However, the text is illogical and incomprehensible. The text contains professional slang while being either too short and plain or too long and rambling. The text is clumsy and contains frequent spelling errors.
Referencing <ul style="list-style-type: none"> knowledge of the literature the scope, relevance, and diversity of references citations as a part of the text 	Central literature, including classics, is utilized aptly. The bibliography is comprehensive but not exaggerated and all the references are relevant. The references are mainly from high quality publications. Citations are accurate, technically flawless, and match naturally the surrounding narrative.	The student demonstrates good knowledge of the literature. The references link firmly to the research problem and there are flaws only in individual references. Some unreliable sources exist and could have been replaced with more scientific ones. The citations are a natural part of the text.	Literature has been utilized but the bibliography is limited, one-sided, dated, and contain many moderate sources such as websites. Text makes frequent bold assertions without proper referencing. The text uses repeatedly the same few references. Citations are not a natural part of the text.
Appearance <ul style="list-style-type: none"> typesetting, layout, aesthetics pictures, tables, graphics, colors equations, notations 	The thesis is aesthetically pleasing. The tables and pictures are clear, informative, and polished. The captions of tables and pictures are concise and descriptive. The notations are unambiguous, and colors are used appropriately. The layout is well polished.	The layout is neat. The tables and pictures are mostly clear, but the visual look could be improved. The captions are partly either too brief or unnecessarily long and repetitive. In overall, the thesis has the look of a professional scientific thesis.	The thesis meets the technical requirements, but the finishing touches are done sloppily. The tables and pictures are not informative, and they are placed disorderly. The captions are incomplete. Layout has not been paid any attention.
Title and abstract (Usually a less important item) <ul style="list-style-type: none"> compelling title, informative and concise abstract 	The title is descriptive, explicit, witty, but not artificially sensational. Finnish and English abstracts are catchy and to the point. They summarize the goals, background and notable achievements, and attract to read the rest of the thesis.	The title is clear, simple, and understandable. The abstracts present the goals, background and notable achievements of the thesis well. One of the abstracts may be textually less meritorious.	The title is confusing and does not match the topic of the thesis. The abstract describes the meaning of the thesis but is textually of poor quality. The abstract does not attract to read the thesis at all.
Independence and staying on schedule (Assessed by the thesis supervisor)	The student conducted the research independently and took efficient advantage of the offered guidance. The thesis was finished in the planned timetable.	The supervisor had a significant role in advancing the thesis. The thesis was slightly delayed without acceptable reasons.	The practical work of the thesis was done independently but advancing the thesis was the supervisor's responsibility. The thesis was significantly delayed without acceptable reasons.

The criteria are always considered *when applicable*. The criteria for Very Good (4) and Satisfactory (2) are determined by interpolation. The final grade of the thesis is *not* supposed to be an arithmetic mean over the different assessment items.