Version 2.5, 20120306 Author: Tony Gorschek Applicable to roles: Supervisor, Faculty Reviewer, Shadow Supervisor, Examiner

1. Introduction ----

This thesis rubric is a decision support tool for supervisors. The rubric needs to be filled out completely. If there is a deviation between the grade indicated by the calculated score of the rubric and the grade recommended by the reviewer*, this deviation needs to be properly motivated under Section 3.J.

Each aspect should be graded on a scale from 5 to 0, where 5 denotes perfect work (ECTS grade A), and 0 denotes failed work (ECTS grade F). A grade of 1 is considered OK or PASS (ECTS grade E)**. The average aspect score represents the calculated score of the rubric and may be used as a thesis grade indicator. Refer to the end of this document for a general description of expectations for each specific grade. OBSERVE, Section 3.I, 3.IE, and 3.P are ONLY graded/filled in by the Supervisor.***

- * The rubric should be filled out completely every time, however the rubric should be seen as a support tool and not forcing a grade. If a deviation exists, between the rubric calculated grade and the grade given, there should be a proper motivation for this under Section 3.J. This motivation should in detail explain the motivation for the grade that deviates from the rubric calculated one.
- ** If any of the aspects get a "0" the entire thesis can and should be failed independent of the grades of the other aspects. The reasoning being e.g. that a perfect Analysis (3.D.) is meaningless if e.g. the research method (3.ME.) is substantially flawed.
- *** The Supervisor has 10 criteria to grade (thus divides with 10), the other roles have only 9 criteria (divide by 9), to get the average score. Observe(!) two Y/N questions have been added in the end of the rubric that are mandatory for supervisors.

(Filled in b	y all])
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2. Project information and Grade Summary -----

Thesis title:

Thesis id:

Student 1 name:

Student 1 social security number:

Student 2 name:

Student 2 social security number:

Total score (sum the values of the 9 or 10 criteria below):

Average score (divide total by 9 or 10):

Recommended grade (ECTS):

(Grade indication for average scores

 $\sim 5 \Rightarrow A, \sim 4 \Rightarrow B, \sim 3 \Rightarrow C, \sim 2.0 \Rightarrow D \text{ or } E, \sim 1 \text{ or } < 1.0 \Rightarrow F$

but extremes in any direction can change the grade, e.g. "0:missing" in one category should result in an F even if the overall score is higher)

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(Filled in by all)-----

3. Evaluation -----

***3.P. Research problem, aim and research questions/hypothesis are...

(ingenious, original, important for field) **5:** very clear

4: very clear (novel, important for field) 3: clear (meaningful, relevant for field) 2: clear (conventional, relevant but not new) (conventional, somewhat relevant) 1: unclear

0: missing or cannot be judged

- ***3.MA. Research materials are all materials collected by the students that build up the theoretical and empirical base for the thesis, e.g. (i) related work and (ii) background materials needed to explain, motivate, and place the thesis work in a context. This includes materials that are needed for a reader as a background to understand the contents and contribution of the thesis. The research materials are...
- **5:** primary material (collected during project and complete from all perspectives)
- **4:** primary material (collected during project but could be more in-depth)
- 3: limited primary material (collected during project, but some parts are missing)
- 2: very limited primary material (collected during project, but very limited)
- **1:** limited primary material (collected for other purposes)
- **0:** missing or cannot be judged

NOTE: "collected during project" denotes that the students put effort during the thesis project to collect the materials, "collected for other purposes" means that the students were given the material (more or less), or got it from a previous project.

- ***3.ME. Research methods in a thesis can be judged from two main perspectives,
- (i) understanding of research method(s), and (ii) use of a research method(s). Each is explained below:
- (i) include aspects such as "did the students develop new methods", or "use conventional methods in a novel way"?
- (ii) include aspects such as "was the method used suitable for the work done", "was the method(s)'s suitability evaluated", "was a validity evaluation performed weighing both method and design against its inevitable pros and cons", "was the design of the 'study' good", "was the execution of the 'study' good"?

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Both perspectives should be part of the grading below:

- **5:** (new methods developed [OR] conventional methods used very well) [AND] suitability of the methods were properly analyzed [AND] an extensive validity evaluation was done
- **4:** (new methods developed [OR] conventional methods used very well) [AND] suitability of the methods were properly analyzed [AND] a validity evaluation was done but could be more thorough
- **3:** (new methods developed [OR] conventional methods used very well) [AND] suitability of the methods were somewhat analyzed [AND] a validity evaluation was done but could be more thorough
- **2:** conventional methods used [AND] suitability of the methods were somewhat analyzed [AND] a validity evaluation was done but could be more thorough
- 1: good enough use, analysis and validity, but not more than that...
- **0:** poor use of method [AND] (missing/inadequate suitability analysis [OR] missing/inadequate validity evaluation)

NOTE: the use of a conventional method includes/assumes adequately adapting it to fit the purpose of the study (if relevant).

***3.R. Research results

- **5:** produced by researcher (new & scientifically important)
- **4:** produced by researcher (new views)
- **3:** produced by researcher (extends existing views)
- **2:** produced by researcher (supports existing views)
- 1: based on active analysis of literature
- **0:** based on passive analysis of literature [OR] shallow presentation [OR] unclear

NOTE: In the case of e.g. a systematic review or e.g. a survey, the results can be said to be "produced by researcher" if no-one else has collected the same results before and the researchers uses new results as a substantial part of the thesis. The results should also be good enough to support a synthesis (see 3.D.; as the synthesis is often apparent in the Analysis and Discussion of a thesis).

***3.D. Analysis/Discussion...

- **5:** the students own, creative and complete contribution, comparing with related scientific work, based on results in thesis, addresses research questions/hypothesis
- **4:** own, excellent contribution, some comparison to related work, based on results, , addresses research questions/hypothesis
- **3:** own, significant contribution, little comparison to related work, based on results, addresses research questions/hypothesis
- **2:** own, enough contribution, based on results, , addresses research questions/hypothesis
- 1: passive without analysis, mostly result statements, based on results

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0: not totally based on material/results, very thin

***3.K. Student(s) knowledge of the research area...

- **5:** expert level
- 4: thorough and solid level
- 3: thoroughly covers the area
- 2: covers the area
- 1: enough but passively used
- **0:** limited/shallow knowledge

NOTE: This should be a overall assessment of the student(s) knowledge in the research area (thus you assess this criteria from the entire thesis).

***3.C. Conclusions are:

- **5:** new/ingenious, crisp, based on analysis, answering research questions/hypothesis
- **4:** clear merit, based on analysis, answering research questions/hypothesis
- 3: well presented, based on analysis, answering research questions/hypothesis
- 2: impartial, good enough but not excellent
- 1: somewhat flawed
- 0: flawed

- ***3.RS. Reference list and use of sources/references as well as the quality of the references are:
 - **5:** expert/multifaceted use (excellent reference list)
 - **4:** excellent use (complete reference list)
 - **3:** good use (good reference list)
 - **2:** impartial use (error-free reference list)
 - **1:** fairly impartial use (some flaws in reference list but nothing serious)
 - **0:** unclear use (incomplete reference list, some non-scientific sources)

***3.L. Language and knowledge of scientific language

- **5:** expert level text and use of scientific terms (very few mistakes, almost flawless text)
- **4:** excellent text and use of scientific terms (few mistakes)
- **3:** good text and use of scientific terms (minor mistakes)
- 2: impartial text and good use of scientific terms
- 1: impartial text but somewhat inexact use of scientific terms
- **0:** colloquial language and very inexact use of scientific terms, lack in language makes the thesis hard to understand

NOTE: The main aspect that should be judge here is the ability of the student to use scientific language and convey the information and points made by the

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thesis. Issues such as spelling will and should draw down the grading, but is not the main point to be judged unless it hampers understanding.

(Filled in by Supervisor only)-----

***3.I. Independence/Critical Thinking/Creativity (Two main aspects in this category, idea and execution, see note below for desc.)

5: expert level (the student utilizes the supervisor as an expert "consultant" but the student is the originator of ideas, investigates and performs the actual work independently and creatively. The student is self-sufficient in terms of originator, execution, and reporting the work)

- **4:** excellent (the student utilizes the supervisor as an expert "consultant" but the student is for the most part the originator of ideas, investigates and performs the actual work independently and creatively)
- **3:** good (the student utilizes the supervisor as an expert "partner" but the student is for a substantial part the originator of ideas, investigates and performs the actual work relatively independently and creatively)
- **2:** somewhat (the student relies on the supervisor for the ideas, and to control the quality of the execution to a substantial extent. The student contributes to the ideas and how the execution is done, but not substantially)
- 1: weakly (the student relies on the supervisor for the ideas and how the execution of the work is done, but the student has a non-trivial contribution to either)
- **0:** dependent (the student is reliant on the supervisor to tell him/her what to do, and there is no real contribution to the idea or how the work is executed from the students side)

NOTE: Two main factors exist in this point, the "Idea" and "execution". Idea is the topic idea that is the basis for the thesis. The execution is the contribution in relation to HOW the work is done (selection, design, operation of research method).

If for any reason the student is not the one DOING the work, this should be considered under point 3.ME. and 3.R.

Independence does not mean that the student is not allowed to utilize the supervisor, rather that the student has the ability to independently be creative, do work, follow-up leads, adapt in relation to knowledge acquisition (adapt as he/she learns). Also, the ability to analyze, judge, and handle complex scenarios with limited information should be judged.

***3.IE. Individual Examination Question (if the students did the thesis in a group) Did both students contribute approximately equally to the thesis and the thesis work? (put an "x")

YES:

NO: (if no, clarify and contact examiner)

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***3.P. Plagiarism check (only relevant if you are the supervisor of the thesis) Did you perform a plagiarism check of the final thesis draft? (put an "x")
YES, no serious problems found:
YES, the following problems found: Explain:
NO: (if no, clarify and contact examiner) Explain:
(Filled in by all if relevant)
***3.J.Comments/Clarification (mandatory if rubric based grade differs from recommended grade)

ECTS Grade Characterization

The expected level of contents and quality related to the grade of a Master's thesis -----

A – The thesis addresses a relevant problem and investigates a reasonably novel idea. The overall level of ambition is shown to be very high. The outline and flow of text is excellent, with well-formulated research questions, a clear and concise overview of related work, a comprehensive description of the applied research method(s), and a well-presented and evaluated contribution. Not only should the research method be clearly described and motivated, the presentation of the research method should also reflect a sound understanding of research methodology in general and the applied method(s) in particular. The evaluation should be suitable for the problem at hand, i.e. it may be quite limited empirical

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character if the main contribution is theoretical. The thesis should contain a rigorous analysis of the results, an insightful discussion, and logical conclusions drawn from the work conducted. Moreover, the analysis and the conclusions thereof should answer the research questions posed. This implies that synthesis is achieved. References are very good with a good coverage of the area. The reference list contains an adequate number of peer-reviewed articles, preferably from relevant journals and the references are well balanced over the years in which the research area has existed. The citations included are of original sources and not of secondary sources. The goal is that publication should be extractable from the thesis publishable in a peer-reviewed venue. The language should only contain very minor flaws.

- B The thesis manages almost to reach grade A, but it contains some minor problems. For example, the idea is not really that novel, the students do not refer to the original sources or something else of fairly trivial nature or the language contains several minor mistakes. In general this is a very well designed, executed, and reported research project.
- C The thesis meets most of the requirements for grade A, but contains one or two major problems (or weaknesses). For example the research method(s) applied are not properly compared to alternatives and thus motivated (observe, in this example the method(s) used are well defined). The presentation of the thesis could be improved and the language can contain some faults.
- D The thesis makes a reasonable contribution, but it fails on several aspects in relation to a thesis of grade A.
- E The thesis lacks integral parts or includes several very weak parts in relation to a thesis of grade A. It is still an acceptable thesis, and the thesis as such is not flawed. The grade E represents the fact that the thesis on average is mediocre. A typical example of a weakness that may be acceptable for a level E thesis is a lack of an extensive analysis. The weakness can also be in the level of ambition and execution, that is, too few data points to draw any real conclusions in combination with weak analysis of the data that is there.
- F The thesis is flawed or such major parts are missing that it is clear that the student(s) does not have basic understanding of how to conduct a research study. Alternatively, the thesis could very well meet most of the requirements of a grade E thesis but the grammar and spelling is poor to the degree that major points are a matter of subjective interpretation.

GENERAL – Any thesis with an E or higher (passing) grade should be complete in terms of containing the bare minimum level of components. For example, an E thesis must include a research methodology section or equivalent. It is important to recognize that an E-level thesis is complete and has a contribution (albeit limited). If not, it is an F thesis.