

## Engineering Research Thesis A – Marking Rubric for Preliminary Thesis Report

Relevant Units: CIVL4090, COMP4092, ELEC4092, ENGG8090, MECH4092, MTRN4092, TELE4092 and ENGG4092

**Student Name and Surname:**

**Important Note for Marker:** Once completed, this form should be retained by the marker for record and a e-copy be placed in the OneDrive folder (a link will be emailed to you with the announcement of marking commencement). Markers should add a brief justification/comments/observations in space provided at the end of this form. To submit marks: (a) go to iLearn, (b) go to Thesis A page, (c) open Gradebook [it is under the Tools drop down menu, in the red ribbon at the top], (d) enter your marks in the column designated as 'Report Marker 1' or 'Report Marker 2', as applicable. Use the following formula to calculate the final mark:

$$\text{Final Mark} = [(\text{Mark for Attribute 1}) \times 0.5] + [(\text{Mark for Attribute 2}) \times 0.3] + [(\text{Mark for Attribute 3}) \times 0.1] + [(\text{Mark for Attribute 4}) \times 0.1]$$

Brief justification for awarding these marks (to assist during the moderation process, particularly where the recommended grade is in Distinction or High Distinction category):

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Marking is based on demonstration of the following three attributes:

1. Attribute 1: Reviewing the associated literary and scholarly work (60%)
2. Attribute 2: Project planning, progress and achievements so far (30%)
3. Attribute 3: Presentation and professionalism (10%)

### Attribute 1: Reviewing the associated literary and scholarly work

Grade	Mark Range	Expectation	Details
Fail	0-49	Unsatisfactory	Unsatisfactory work can be characterised by various aspects, including one or more of the following: irrelevant to the student's discipline, inadequately focussing on non-peer-reviewed sources having loose basis (such as the websites, Wikipedia...), performing superficial reviews which do not converge on the core of the literature in the relevant research area, and/or relying on literature which is outdated and not current.

Pass	50-64	Satisfactory	The reviewed literature is sufficient to start on the proposed research, although it can be envisaged that more thorough review would be necessary as the project progresses. The presented review of literature provides adequate details for the reader to understand and appreciate the context of the research to be undertaken. Yet, the review does not have a logical flow and some specific developments in the area are overlooked.
Credit	65-74	Solid	In addition to Satisfactory expectation, the student demonstrates understanding of the conceptual connections in the reviewed works, and is able to identify important correlations or differences. Significant areas of literature in the relevant discipline have been reviewed and no important works have been overlooked.
D	75-84	Solid and well-connected	In addition to Solid expectation, the student has clearly identified key gaps in knowledge and outlined in a structured manner. Understanding of the conceptual relationships between reviewed works and the proposed research project is demonstrated. Intellectual connections between the different parts of the review have been made and the student is able to relate their work in context.
HD	85-100	Review article quality	In addition to the solid and well-connected expectation, the student demonstrates critical judgement about the reviewed works in the context of their proposed research project. The quality, depth and breadth of the reviewed research and the critical review exceeds D expectations in every aspect.

## Attribute 2: Articulating a research question, plan and thesis outline, work completed to date

Grade	Mark Range	Expectation	Details
Fail	0-49	Unsatisfactory	The research question is not explained satisfactorily, and the student does not demonstrate a clear understanding of the project. The research question is not relevant to the student's discipline. Research plan is not present, OR does not have sufficient detail to demonstrate the project can be successfully completed as a thesis project OR looks too simple for the scope of a thesis project. A thesis outline is not presented (i.e., a barebones structure in the preliminary thesis report including thesis chapter headings – see samples provided on iLearn). Loose statements such as "The aim is to understand ABC" does not qualify as a clear explanation, unless followed by a solid, intellectual explanation on why they do not currently understand ABC even after a complete session of background search associated with it, and why it's important.
Pass	50-64	Broad context present but plan is not specific	The research question and plan are presented, but lack adequate detail and a logical plan of investigation. To the least, the plan communicates that the project is feasible as a research thesis. A barebones structure outlining the chapter and key section headings is included, but are too broad and do not show a particular relevance to the project. The reader is able to conclude that the student has made a superficial attempt at planning but a solid grasp of the logic of the investigation is not evident. Mostly, generic statements are made in the plan, e.g., "program a module" or "create a mechanical model" or "analyze the results", without explaining the specifics aimed through these activities, possible methods to achieve these etc.
Credit	65-74	Broad context present with specific logical plan	In addition to the Pass requirements, the plan demonstrates that the student understands the resources and time required for the project, and has acquired the necessary trainings and resources (or access to resources thereof). The thesis outline reflects the research plan, but lacks adequate detail. The plan does not appear to be informed by the literature review but rather can be viewed largely as independent to the literature review. The reader is able to understand the approach in the research plan and is convinced that it may answer the posed research question.

D	75-84	Broad context present with specific logical plan. Plan fits lit. review and prep. is evident.	In addition to the Credit requirements, the plan synchronizes with the narrative set out by the literature review. The logic of the presented plan is clear in the narrow context of the reviewed literature. A logical and feasible course of action is demonstrated with realistic milestones/deliverables planned. Actual completion of preparatory work required for the project, such as, learn new tools/techniques, training for test equipment, new software skills etc., is demonstrated. The student completed some preparatory work and provided sufficient evidence for the completed work.
HD	85-100	Excellent planning and progress.	In addition to the Distinction requirements, the presented plan is robust and has provision for project variations, anticipates recovery from failures, and includes contingencies. The barebones structure includes sub-sections, a logical connection to the project plan and to the literature review thereof.

### Attribute 3: Preliminary Results

Grade	Mark Range	Expectation	Details
Fail	0-49	No preliminary results	The student fails to present preliminary results, or the results are simply extracted from previous work without implementing, developing code, or establishing an independent experimental setup.
Pass	50-64	Some preliminary results but with limited relevance	The student presents initial results, mainly by implementing an algorithm or developing an experimental setup proposed in previous work. However, there is a disconnect in explaining the relevance of these preliminary results to the implementation of Thesis B. It appears as an independent exercise to build background in the field.
Credit	65-74	Good results with some relevance to proposed approach	The student presents promising initial results, providing sound justification for the viability of the proposed approach. While these results could serve as a foundation for commencing Thesis B, they indicate some gaps in skills that require further background development in the next phase.
D	75-84	Solid preliminary results, demonstrating the viability of the proposed approach	The student delivers solid results to start Thesis B and articulates the feasibility of the proposed approach for implementing the project. The initial results indicate that the student acquired all necessary background, ready to start Thesis B.
HD	85-100	Outstanding preliminary results that can form a part of Thesis B work	The student presents outstanding initial results by implementing a novel algorithm or developing a novel experimental framework. The results meet the standard to form an important part of the Thesis B work, accompanied by a clear plan for improving or extending the initial findings in Thesis B. Work is well into the execution stage of major tasks in the thesis project plan towards Thesis B.

#### Attribute 4: Presentation and Professionalism

Grade	Mark Range	Expectation	Details
Fail	0-49	Hinders the flow of document	Presentation is inconsistent and impedes the reading of the document. Common examples are the use of multiple inconsistent citation styles, or improper and incomplete citations, inarticulate grammar and sentence structures, unlabeled figures and tables, inconsistent document formatting.
Pass	50-64	Poor formatting and structuring	Presentation adheres to at least a minimum professional spirit. Figures/tables etc., are labelled, in-text citations follow the reference list correctly in a consistent citation format, formatting and layout is inconsistent at times, but the reader is able to make the sense of the context being communicated.
Credit	65-74	Reasonable but with poor layout	Appropriate use of section and sub-section heading structures, but layout devices (such as bullets, lists) are not utilized to maximise readability. Large text pools where the reader has to fish for information. Figures and diagrams are labelled, formatting is consistent, figures/graphs are clear, of good quality and all sections clearly labelled. Some redundancy is noted, such as unnecessary, repetitive or unusually large or low-quality figures, loss in succinctness of text, unusually wide margins, unnecessary appendices, etc.
D	75-84	High level of professionalism but improvements possible in presentation	Appropriate use of section and sub-section heading structures with effectively using layout devices to present information in a way that communicates the maximum content in a minimal effort from the reader. Presentation engages the reader. Sections laid out logically, with reasonable judgement in the presentation of data, tables or figures. Figures and diagrams are correctly and clearly labelled, text spacing aids readability, consistent formatting. Mostly, raw data is converted to information, but it is difficult to extract qualitative or quantitative trends. Some of the graphical presentation of data is inappropriate such as poor choice of axes, overcrowding, poor use of chart space etc.
HD	85-100	Professional, crisp and convincing.	In addition to the Distinction requirements, text is clear and discussions are concise, leading to the point with succinct judgements. Graphical presentation of data is appropriate, data is reasonably processed into information, and trends are quantitatively or qualitatively extracted. Presentation is clear, and the text versus document length value is effectively communicated.