

# DSAIT Thesis Project rubric

Each learning objective (LO) contributes to the final result as a partial grade. The assessment rubric defines four performance levels: Insufficient (<6), Sufficient (6–7), Good (7.0–8.5), and Excellent (8.5–10).

To pass, students must achieve an average score of at least Sufficient (6.0) for each learning objective. The final grade for the thesis is calculated as a weighted average of the partial grades, with LO1 and LO2 each accounting for 35%, LO3 for 20%, and LO4 for 10%.

| Criteria                                                                                                                                                                                                                          | Insufficient (<6)                                                                                                                                                                                                                      | Sufficient (6-7)                                                                                                                                                                                                       | Good (7.0-8.5)                                                                                                                                                                                                      | Excellent (8.5-10)                                                                                                                                                                                              |
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| <b>The student is able to conduct a research project in a DSAIT field</b>                                                                                                                                                         |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                        |                                                                                                                                                                                                                     |                                                                                                                                                                                                                 |
| <b>Planning and interaction:</b> The student works in a plan-based manner on a self-defined project plan and interacts professionally and constructively with peers and supervisor(s)                                             | The student does not create a coherent project plan or does not work in a plan-based manner or often struggles to interact constructively or professionally with peers and supervisor(s).                                              | The student creates a basic project plan or requires significant guidance to work in a plan-based manner and interacts mostly constructive with peers and supervisor(s).                                               | The student creates a well-thought-out project plan, works in a plan-based manner with appropriate consultation, and interacts constructively with peers and supervisor(s) while keeping them informed of progress. | The student creates a well-thought-out and adaptable project plan, works in a plan-based manner, and interacts professionally and openly with peers and supervisor(s), demonstrating receptiveness to feedback. |
| <b>Research and design methods:</b> The student explains and justifies their choice of adequate research and design methods, including strengths and limitations, and applies these methods appropriately to the research project | The student provides insufficient explanation or justification for their choice of methods, or the application of research and design methods is inappropriate or incorrect, with little to no reflection on strengths or limitations. | The student provides a basic explanation and justification for their choice of methods and the application of research and design methods is generally appropriate, with some reflection on strengths and limitations. | The student provides a clear explanation and justification for their choice and application of appropriate research and design methods with a reflection on strengths and limitations.                              | The student provides a thorough explanation, strong justification, and effective application of appropriate research and design methods. The reflection on strengths and limitations is focused and insightful. |

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| <b>Initiative:</b> The student takes initiative, possibly in collaboration with the supervisor, and provides their own input in the research project | The student shows little to no initiative or relies entirely on the supervisor for direction and input.                                                                                                                                                                                                       | The student shows some initiative with regard to providing own input within the research project.                                                                                                                                                                                                        | The student regularly takes initiative and contributes meaningful input to the research project.                                                                                                                                                                                                                                          | The student consistently takes initiative; their contributions significantly advance the research project.                                                                                                                                                                                                                                                           |
| <b>DSAIT Knowledge:</b> The student demonstrates mastery of DSAIT concepts, theories, and practices relevant to the research project                 | The student demonstrates limited understanding of DSAIT concepts relevant to the project. They are not able to explain concepts and methods relevant to the project, provide examples of how the project builds upon or diverges from existing research or name the gaps addressed by their research project. | The student demonstrates a basic understanding of DSAIT knowledge relevant to the project. They can explain some concepts and methods relevant to the project, provide examples of how the project builds upon or diverges from existing research and name the gaps addressed by their research project. | The student demonstrates a solid understanding of DSAIT knowledge relevant to the project. They can explain different concepts and methods relevant to the project and name advantages and limitations, describe how the project builds upon or diverges from existing research and explain the gaps addressed by their research project. | The student demonstrates excellent mastery of DSAIT knowledge relevant to the project. They can clearly explain key concepts and methods relevant to the project pinpointing their advantages and limitations, describe thoroughly how the project builds upon or diverges from existing research and discuss the specific gaps addressed by their research project. |
| Feedback (mandatory):                                                                                                                                |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      |
| <b>The student is able to design DSAIT solutions</b>                                                                                                 |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Application of theory:</b> The student applies DSAIT concepts and theories to the solution or direction for a possible solution                   | The student fails to effectively apply DSAIT concepts and theories to the solution. The use of DSAIT concepts and theories is incorrect, unclear, or irrelevant to the problem.                                                                                                                               | The student applies DSAIT concepts and theories in a basic and generally appropriate way. The application may lack depth or show some inconsistency.                                                                                                                                                     | The student applies DSAIT concepts and theories in a coherent and consistent manner to the solution or direction for a possible solution.                                                                                                                                                                                                 | The student integrates existing DSAIT theories in an original and innovative manner to the solution or direction for a possible solution.                                                                                                                                                                                                                            |

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| <b>Reliability of research:</b> The student conducts a reliable study, providing sufficient information for the results to be independently verified or reproduced | The study is unreliable or lacks proper documentation, making it difficult or impossible to verify or reproduce.                                                              | The study is overall reliable, and while most information is provided, some details may need further clarification for verification or reproduction.                               | The study is reliable, with sufficient information provided for others to independently verify or reproduce the results.                                                                                                                                     | The study is highly reliable, with comprehensive and clear documentation that fully supports independent verification or reproduction of the results.                                                                                                           |
| <b>Interpretation of results:</b> The student interprets results and draws conclusions in relation to their DSAIT solution or direction for a possible solution    | The student's interpretation of the results is unclear or inaccurate or conclusions are unsupported or not linked to the solution or direction for a possible solution.       | The student provides a basic interpretation of the results and draws generally relevant conclusions, though they may lack depth or full support.                                   | The student provides a clear, accurate interpretation and draws well-supported conclusions. Claims about the solution's properties and limitations are explained and reasonably justified.                                                                   | The student provides a thorough and insightful interpretation of the results, drawing comprehensive and well-founded conclusions. Claims about the solution's properties and limitations are clearly articulated and well substantiated by results or analysis. |
| <b>Significance:</b> The student makes a relevant contribution to DSAIT, another scientific field, or a real-world challenge drawing on DSAIT concepts and methods | The work demonstrates no clear relevance or potential for contributing to the DSAIT field, scientific knowledge, or real-world challenges. It lacks coherence and innovation. | The work demonstrates some relevance to the DSAIT field but requires significant rework to make a meaningful contribution. It addresses a problem but lacks depth and originality. | The work demonstrates a contribution to the DSAIT field. It provides new insight to a research or practical problem, has practical value, or could potentially with additional effort contribute to an artefact, dataset, or a potential future publication. | The work makes a substantial and impactful contribution, demonstrating strong innovation and creativity. It has immediate relevance, such as contributing to an artefact, dataset, or shows clear potential for publication.                                    |
| Feedback (mandatory):                                                                                                                                              |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                 |
| The student is able to communicate about their research                                                                                                            |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                 |

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| <b>Report:</b> The student writes a research report that shows coherence, clarity of content and appropriate level of detail.                           | The report lacks coherence, with unclear or fragmented content, making it difficult to follow. It provides insufficient or excessive detail, undermining the clarity of the research, or the report contains many errors in spelling or grammar. | The report is organized but may have sections that are somewhat hard to follow. The writing is understandable but could benefit from clearer language, more concise explanations, or better organization of details.                                                    | The report is well-organized, with clear, understandable writing. The content is detailed and accessible, and the writing effectively communicates the main points without unnecessary complexity.                    | The report is exceptionally well-structured and written in a way that is easy to understand. The writing is concise yet thorough, with well-chosen language and logical flow, making complex ideas clear and accessible to the reader.                        |
| <b>Presentation:</b> The student clearly communicates the essence of the research in their presentation and uses (visual) aids to support understanding | The presentation lacks clarity, or the main points are not sufficiently distinguished from ancillary information or (visual) aids are used poorly or fail to support understanding.                                                              | The presentation communicates the research in a generally understandable manner. However, the main points are not always clearly distinguished from ancillary information. (Visual) aids are used, but do not always effectively support understanding of the research. | The presentation communicates the research clearly and is understandable. The main points are well separated from ancillary information. (Visual) aids are used effectively to support understanding of the research. | The presentation communicates the research with outstanding clarity, style, and effectiveness. The main points are clearly and effectively distinguished from ancillary information. Excellent use of (visual) aids to enhance understanding of the research. |
| <b>Defence:</b> The student gives coherent and relevant answers to questions from the audience and defence committee                                    | The student struggles to provide coherent or relevant answers to the audience's and committee's questions. Many answers are incomplete.                                                                                                          | The student provides mostly coherent and relevant answers to the audience's and committee's questions. Some responses lack depth or clarity.                                                                                                                            | The student provides coherent and relevant answers to the audience's and committee's questions with depth and understanding.                                                                                          | The student provides clear, unambiguous, and relevant answers to all questions from the audience and committee.                                                                                                                                               |
| Feedback (mandatory):                                                                                                                                   |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                               |

| The student is able to reflect on their own research and the DSAIT field in the temporal and societal context                                                                                                                                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                     |                                                                                                                                                                                      |                                                                                                                                                                                                                          |
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| <b>Reflection on research in broader DSAIT field:</b> The student critically reflects on their own research in the context of the broader DSAIT field.                                                                                                                 | The student shows little or no reflection on their research lacking meaningful engagement with the broader DSAIT field.                                                                                                           | The student provides a basic reflection on how their research relates to existing research and trends in the broader DSAIT field but with limited depth.                            | The student reflects clearly on how their research relates to existing research and trends in the broader DSAIT field.                                                               | The student reflects thoroughly on how their research relates to existing research and trends in the broader DSAIT field, exploring insightful connections to challenges, and advancements in the field.                 |
| <b>Reflection on implications and applicability:</b> The student reflects on the implications and applicability of their work to responsibly contribute to the solution of real-world challenges while taking the perspectives of different stakeholders into account. | The student provides insufficient reflection on implications, limitations, and applicability, or real-world relevance is unclear or missing or the student does not take the perspectives of different stakeholders into account. | The student provides a basic reflection on implications, and potential contribution to real-world challenges, while taking the perspectives of different stakeholders into account. | The student reflects clearly on implications, limitations, and real-world impact, considering potential risks, while taking the perspectives of different stakeholders into account. | The student provides a thorough, insightful reflection on implications, limitations, and real-world impact, with consideration of potential risks, while taking the perspectives of different stakeholders into account. |