ENGR 489 Final Report Marking Guide

Last Updated: 26 April 2022

Expected Performance

Trait	Excellent [16 - 20]	Good [13 - 15]	Satisfactory [10 - 12]
Motivation and Design [20 marks]	Concisely outlines the concept and explicitly describes important aspects of the final product. Provides a substantial and judicious review of the literature and the state of the art. There are neither obvious omissions nor unnecessary digressions. References and ideas introduced here are foundational and are extensively used in the rest of the report.	Concisely outlines the concept without extrapolating some important aspects. The review shows a comprehensive grasp of the fundamental aspects of the state of the art and the literature. References and ideas introduced here are used subsequently in some sections of the report.	Describes the concept in a basic way, but some important points are only implicitly covered and the final product is unclear. Provides a limited review of the state of the art or the literature, or a relevant but inappropriately exhaustive review, or a review which is too limited/verbose to be of much subsequent use in the report.
Implementation [20 marks]	TRL 6-8 achieved: *demonstration of a working prototype well beyond that of TRL 5 tested in a relevant environment, or an actual system tested in an operational environment*. Both craftsmanship and technological innovation are represented in the report.	TRL 5 achieved*: the basic technological components are integrated with reasonably realistic supporting elements and tested in a simulated environment*.	TRL 4 achieved: *Basic technological components are implemented as standalone modules with little integration among components.*
Evaluation [20 marks]	A rigorous evaluation regime is both described and executed, with no significant oversights or omissions. Experiments, tests or simulations are	The project has been evaluated in a way that covers fitness-for-purpose but with limitations or omissions which prevent the evaluation from being excellent. Limitations might include limited reproducibility, incomplete descriptions	An adequate evaluation, never rising to the level expected for good. For example, tests for reproducibility may be missing, or the evaluation is overly qualitative when a quantitative

	described in sufficient detail that they could be reproduced by others.	and/or insufficiently quantitative as might reasonably be expected.	evaluation would reasonably be expected.
Critical Thinking [20 marks]	An overall design implementation and evaluation which shows an: understanding of the technical issues from different perspectives; appreciation of limitations of the artefact developed; consideration of how the artefact could be further improved.	Shows a strong comprehension of the technical issues, but a limited or lightweight understanding of limitations or room for improvement.	Exhibits a basic grasp of the technical issues from the most important perspective, without considering any others. Considers only benefits without identifying limitations.
Communication: Written & Oral [20 marks]	See the separate guide to written communication.	See the separate guide to written communication.	See the separate guide to written communication.

Performance Below the Standard Required

Trait	Poor [8 - 9]	Well Below Standard [4 - 7]	Seriously Below Standard [0 - 3]
Motivation and Design [20 marks]	Some evidence showing the important aspects of the project, but the direct motivations are not clear and with limited details	No recent work is reviewed, and neither overall nor detailed design	No review of existing work, no description on motivation and design
Implementation [20 marks]	Only a small amount of implementation done	None of the implementation	Incomplete experiments/simulation
Evaluation [20 marks]	Some experiments have been conducted, but have clear limitations	Incomplete or a small amount of evaluation, but limited effort has been shown	No results/ experiments/simulation done in the project and no effort can be seen for putting towards the evaluation
Critical Thinking [20 marks]	Some idea presented, but the overall project is not convincing	Very limited work has been done, but there are major problems	No attempt for discovering any limitation of existing or the proposed work
Communication: Written & Oral [20 marks]	Written and oral communication are weighted equally. Please see the separate guides to written and oral communication for marking guidance.	Not clearly describe the problem, the ideas and the main contributions, but able to give general overview of the project	No complete report, lack of chapter, only a few pages

Notes

1. **Novelty:** Technical or scientific novelty is not a *requirement* for honours-level projects and a "lack of novelty" should not be an impediment to achieving an outstanding grade (A+) in Implementation or Evaluation.

2. The traits may be grouped as follows:

   - *Core traits* which are directly assessed through the major sections. Traits 1-3 are the core traits of the final report and presentation.

- *Facilitating traits* which allow the core traits to be expressed and are assessed through the report as a whole. Traits 4-5 are facilitating traits for this report.

The marking schedule above is drawn directly from the relevant sections of the 489 Handbook, available from the course web page. Key phrases are copied below.

Quality of Work

Trait: Motivation and Design

Motivation and Problem Statement

Does the report clearly identify the problem being solved, and motivate the reason a solution would be valuable?

For ENGR students, greater emphasis is placed on connection with real-world problems. For COMP or ELCO students, greater emphasis is placed on connection with existing academic research problems.

Design

Does the report provide clear evidence of design?

This includes, but is not limited to: the identification of necessary constraints imposed by external forces (e.g. budget, operating environment, off-the-shelf components, etc.); the discussion and resolution of various (high-level) design decisions encountered during the project; discussion of the high-level architecture; and, discussion of any experimental work performed to help decide between design decisions. For ENGR students, greater emphasis is placed on using diagrams and notation appropriate for the given specialisation.

Trait: Implementation

Implementation

Does the report provide clear evidence of technical competence?

In particular, that a sensible and well-crafted solution to the problem is given in concise, clear language using diagrams where appropriate. For ENGR students, greater emphasis is placed on craftsmanship and technical innovation. For COMP or ELCO students, greater emphasis is placed on novel contributions within the context of existing academic research.

Trait: Evaluation

Evaluation

Does the report provide clear evidence that an appropriate (e.g. experimental) investigation of the artifact was conducted? For example, to demonstrate that it is fit-for-purpose, or efficient (in some sense), or to confirm a hypothesis, or to discover hitherto unknown properties. At the highest levels, the choices or rationale underlying the evaluation are described, including ideas of fitness for purpose and quality, including conformance to standards where applicable. An excellent or outstanding evaluation is not necessarily *without flaw* but any limitations must be sufficiently minor that they are unlikely to influence the results of the evaluation.

For ENGR students, greater emphasis is placed on demonstrating the artifact is fit-for-purpose through experiment or other appropriate means. For COMP or ELCO students, greater emphasis is placed on the use of scientific experiment (e.g. to make critical observations), and mathematical rigour where appropriate (e.g. a proof of correctness).

Trait: Critical Thinking

Critical Thinking

Does the report provide clear evidence of critical thought?

This should be evident throughout the report and includes, but is not limited to, the following aspects: understanding technical issues from different perspectives; appreciating limitations of the artifact developed; consideration as to how the artifact could be further improved.

Trait: Communication - Written and Oral

Written

Is the report written in an appropriate and professional manner, with due consideration given to presentation?

This includes, but is not limited to: overall report structure; spelling and grammar; consistent bibliography layout including all necessary information (e.g. journal/conference title, page numbers, year, author names, article title); presentation and layout of figures and tables; minimum requirements of written English.

Oral

This is drawn from the relevant section of the 489 Handbook, available from the course web page.