Grading criteria for advanced project reports

The theoretical part of the course covers 3.5 ECTS, the lab exercise 0.5 ECTS and the project 3.5 ECTS. The final grade on the course is calculated using the following ECTS-weighted formula:

$$Total\ course\ score\ [\%]\ =\ \frac{3.5 \cdot Exam\ score\ [\%]\ +\ 3.5 \cdot Project\ score\ [\%]}{3.5\ +\ 3.5} \qquad (1)$$

The grades are divided into the standard slots: U (<40 %)   3 (40-59 %)   4 (60-79 %)   5 (≥80 %)
Note that each part must be passed separately, meaning a total score of >40 % on each part.

Point system
It is possible to be awarded 16 bonus points in addition to the 80 regular points. The bonus points will be rewarded for a well written report and simulation of an optional 3D geometry, see specific criteria in table 1. The grading system is however entirely based on the regular points, meaning that 80 points equal full score (100 %) on the report, but it is possible to get 96 points. There is no distinction made between the types of points in the grading system. Note that the points given in table 1 are maximum potential reduction for the regular point criterion, but maximum rewarded points for the bonus point criterion, see equation for total project score.

Deadline
The deadline for the report is set to **Friday 14/1 at 23.55**. If you have very good reasons, you can contact Krister no later than **11/1** to get the deadline postponed.

If you fail to deliver the report before the deadline the procedure is as follows. The report will only be corrected in case of time and may have to wait until later. **If the report is submitted after deadline but before 29/1 at 23:55, the maximum score on the report will be 32 points (40 % of full score), no matter how well it is written**. If the report is submitted after 29/1 it must be based on a new geometry, contact the supervisor to determine this new geometry. Therefore, you should under no circumstances miss the deadline!

Failed report
If the report is failed (total score < 40 %), you have the opportunity to correct the report based upon comments from the supervisor and resubmit the report. The deadline for resubmitting a corrected report is **one week** from the day you received your grad. A resubmitted report will be given a final score of 32 points (40 % of full score), if it is passed upon resubmission that is. If the report is not corrected or if the deadline for resubmission is not met, the report must be rewritten for a new case.

Recourses regarding writing a report
1. *Att skriva och presentera rapporter*, available on Canvas.
2. Report guidelines from University of Toronto, accessed: 2021-11-19,
   http://www.engineering.utoronto.ca/Directory/students/ecp/handbook/documents/lab.htm

Table 1. *Grading criteria Template.*

Description[1]	Point reduction	Comment to grading
Project deadline		
Missed the deadline	-	Max 40 % of point score
URKUND		
The report has too much overlap with texts not produced by the author	-	Handled case by case
Layout		
Report not customarily outlined (see recourses)	X / 1	
Not used single column layout in the report	X / 1	
Report longer than 15 pages (Introduction - References)	X / 1	
Text below figures or text above tables missing	X / 1	
Relevant equations are not numbered and referred to in the text appropriately	X / 1	
Headlines are not appropriately named and numbered for different levels	X / 1	
Page numbering lacking	X / 1	
Reference list erroneous or incomplete (Used IEEE)	X / 1	
Abstract is lacking or incomplete	X / 1	
Appendices severely misused or containing irrelevant parts	X / 1	
Language		
Extensive misspelling (can be found by word spell-check)	X / 1	
The text contains several grammatically incorrect sentences	X / 1	
The language is inappropriate or not scientific	X / 1	
Introduction		
Project is not put into context by the introduction	X / 1	
No formulation of the project aims	X / 1	
Bonus points: Overall quality of introduction section	X / 1	
Theory		
Theory section not put in any context	X / 1	
The basic equations (Navier-Stokes, RANS etc.) are not presented	X / 1	
Boussinesq approach is not described	X / 1	
The turbulent model is not described both with eq. and text	X / 1	
Boundary and initial conditions are not specified	X / 1	
No definition of used evaluation quantities (P_k^+, U^+, k^+, etc.)	X / 1	
Bonus points: Overall quality of theory section	X / 1	
Methods		
Not possible to reproduce the results using the description in methods	X / 1	

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[1] The descriptions are either formulated to describe what would motivate a point reduction, or content that is expected to be included. If unclear, contact supervisor!

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Insufficient presentation of geometries	X / 1	
Insufficient description of chosen mesh	X / 1	
Not specified approaches for solving poor convergence	X / 1	
Not specified how evaluation quantities are measured (cutlines, points, etc.)	X / 1	
Missing or lacking mesh convergence test (enough with geometry without sensors)	X / 3	
Bonus points: Overall quality of method section	X / 1	
Results		
Irrelevant calculations and data are presented	X / 2	
Lacking presentation of results using text supported by figures	X / 6	
Missing/Lacking use of references and/or reference data	X / 4	
Missing/lacking simulation validation	X / 4	
Lacking quality or choice of presented results	X / 6	
Bonus points: Overall quality of result section	X / 1	
Bonus points: 3D injector	X / 5	
Discussion		
Missing/lacking comparison between the project aims and the results	X / 2	
Missing/lacking discussion regarding mesh and mesh convergence	X / 4	
Missing/lacking comparison with reference data (experimental, numerical and/or theoretical)	X / 4	
Reference limitations not discussed (suitability and/or consequences of differences from your case)	X / 2	
Missing/lacking outlook or suggestion for future studies	X / 2	
Lacking discussion regarding simulation validation	X / 4	
Lacking general discussion regarding the presented results	X / 6	
Missing/lacking logical interpretation/implications of results	X / 2	
Bonus points: Overall quality of discussion	X / 1	
Bonus points: 3D injector	X / 5	
Conclusion		
Missing conclusions	X / 2	
Ungrounded or erroneous conclusions	X / 1	
Bonus points: Overall quality of conclusions	X / 1	

     A. MAX PROJECT POINTS: **80**

     B. TOTAL BONUS POINTS: **X/16**

     C. TOTAL POINT REDUCTION: **X/80**

TOTAL PROJECT SCORE (A + B – C):

PROJECT GRADE: **U: < 32 points (< 40 %)**

                          3: 32 – 47.5 points (40-59 %)

                          4: 48 – 63.5 points (60-79 %)

                          5: ≥ 64 points (≥ 80 %)