

DO'S AND DON'TS

According to assignments: “The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps”. Be careful to include enough information.

Structure, contents

- The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- The IMRD structure (<https://fi.wikipedia.org/wiki/IMRD-rakenne>) *Introduction-material and Methods-Results-Discussion* structure may work in the present study.
- The report should contain a summary, introduction, explanation of the structure and its idealization and parametrization, discussion of all the methods and their results, and conclusions.
- Use division into sections/chapters to improve readability
- Table of contents and nomenclature (the list of physical terms and their meaning) are optional but summary is not.
- Summary should give picture about the contents, aim, and outcomes/conclusions in a concise a qualitative manner (no equations, pictures, numerical values).
- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the report, structure of the reports (optional).
- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- The object structure (picture), its idealization and geometrical/material parameters should be explained in its own section before analysis.
- The report should contain tables, figures, equations, and references.
- Explanations of the methods should be such that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- Include some discussion of modelling error and numerical error effects on results
- Think about the placing of the material carefully, material belonging to introduction should be placed to introduction etc.

Style, formatting

- Although several writers may contribute, try to make the report consistent in style.
- Be consistent with the fonts as well as their styles and sizes
- Avoid bulleted lists as non-standard elements of technical reports
- Divide text into paragraphs to improve clarity. Avoid very short paragraphs.
- Do not use underlining, different fonts etc. formatting without a good reason

Figure, tables and references

- Figures and tables should be understandable even when separated from text.
- Large tables, e.g., for measured (raw) data etc. should be given in an appendix.
- There should be a good reason for using a figure or table (decorative purposes is not enough).
- Do not use colors unless necessary for clarity
- Place all tables and figures and their captions in the same manner (centered, left)
- If the information contents is low, consider giving the same information in text.
- Table captions should be placed above and figure captions below.
- Table and figure captions should describe the contents in a concise manner. Give the detailed explanation in text and refer there to the table or figure.
- All tables and figures should be referenced somewhere in the text
- All sources in the list of references should be used somewhere in the text

- Do not give the same information in a table and in a figure (give the table in an appendix if you want to keep both)
- Report should use at least one reference
- Use some reference for the parameters (like Young's modulus, Poisson's ratio) unless the values can be taken as "well-known" (like acceleration by gravity)
- Avoid referring forward (like saying that the numerical value is given later in Eq. (n). Instead, when giving the numerical value in Eq. (n), refer backwards to the equation used. Try to arrange the material so that referencing to tables, figures etc. appearing later in text is not needed.
- Font size in tables and figures should allow reading
- Use capital first letter in references like Figure 1, Table 1, Fig. 1, Tab. 1, Equation (1), Eq. (1) etc.

Derivations and equations

- Equations should be considered as parts of sentences (even if positioned on a separate line) and all rules for, e.g., using commas and periods apply.
- Avoid many pages of derivations without any text between the equations
- Define/explain all symbols after (near) their first occurrence in an equation/expression/figure etc.
- Number the equations, (n) flushed right on the same row, and refer to equations by their numbers in parenthesis (n)
- Symbols should be italicized. Units should not be italicized.
- Lengthy and detailed derivations (compared with the generic degree of details of the presentation) should be given in an appendix. Give and explain only the cornerstones of the derivation in text.
- In calculation of value of an expression with the known values of the parameters (given for example in table), do not give the expression with the values substituted there.
- Do not use the concise implication or equivalence (mathematical) notation (\rightarrow , \Rightarrow , \Leftrightarrow , \Leftarrow , & etc.) Instead, use "giving" etc. and correctly structured sentences in derivations.
- The source for an equation/mathematical model should be given if the equations cannot be considered as "well-known"
- All expressions should be dimensionally homogeneous. If the values of the physical quantities are substituted in expressions, the dimensions should be included there.

Group A *Likely to be accepted in the present form: Results are there, but there is no discussion about the effect of the parameters. Formatting could be improved. More detailed explanations would be needed.*

- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the study, structure of the study (optional).
- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Symbols should be italicized. Units should not be italicized.
- Define/explain all symbols after (near) their first occurrence in an equation/expression
- Number the equations, (n) flushed right on the same row, and refer to equations by their numbers in parenthesis (n)
- Explanations of the methods should be such that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.

Group B *Likely to be accepted in the present form: Results are there. Dimension analysis part is missing (analytical solution under the title). Abaqus analysis too concise to be understandable. Discussion about the effect of the parameters is missing.*

- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
 - Symbols should be italicized. Units should not be italicized.
 - The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- **Group C** *Likely to be accepted in the present form: Results are there. The way to find the effect of n on the design formula is not clear and explained under dimension analysis. Only effect of n is considered.*
- Symbols should be italicized. Units should not be italicized.
 - Think about the placing of the material carefully, material belonging to introduction should be placed to introduction etc.

Group D *No report*

Group E *May not be accepted in the present form: Missing summary, explanation of the structure, and very concise explanations of the methods (except Abaqus). Discussion about the effect of the parameters is missing.*

- The report should contain a summary, introduction, explanation of the structure and its idealization and parametrization, discussion of all the methods and their results, and conclusions.
- Introduction usually contains some explanation of the context, earlier studies/references. (optional here), aim of the study, structure of the study (optional).
- Avoid bulleted lists as non-standard elements of technical reports.
- Do not give the same information in a table and in a figure (give the table in an appendix if you want to keep both).
- The report should contain tables, figures, equations, and references.

Group F *No report*

Group G *May not be accepted in the present form: Summary is missing. The aim is not consistent with the assignment. Methods cannot be understood (just one expression or figure is not enough). Cannot follow the Abaqus part. Discussion about the effect of the parameters is missing.*

- The report should contain a summary, introduction, explanation of the structure and its idealization and parametrization, discussion of all the methods and their results, and conclusions.
- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Table captions should be placed above and figure captions below.
- Symbols should be italicized. Units should not be italicized.
- Do not give the same information in a table and in a figure (give the table in an appendix if you want to keep both)

Group H *Likely to be accepted in the present form: Results are there. Summary is missing (actually introduction as it contains the summary). Linear fit to experimental data would make more sense. Assigning the proper unit for a symbol does not make sense. Fem results do not make sense ($F/2$ used?).*

- The report should contain a summary, introduction, explanation of the structure and its idealization and parametrization, discussion of all the methods and their results, and conclusions.
- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the report, structure of the report (optional).
- Do not use colors unless necessary for clarity
- Symbols should be italicized. Units should not be italicized.
- Be consistent with the fonts as well as their styles and sizes
- Lengthy and detailed derivations (compared with the generic degree of details of the presentation) should be given in an appendix. Give and explain only the cornerstones of the derivation in text.
- Define/explain all symbols after (near) their first occurrence in an equation/expression
- Number the equations, (n) flushed right on the same row, and refer to equations by their numbers in parenthesis (n)
- Do not give the same information in a table and in a figure (give the table in an appendix if you want to keep both)

Group I *Likely to be accepted in the present form: Results are there, but in Appendix (should be given in “results”). Explanation in “methods” could be elaborated. concise. Discussion about the effect of the parameters is missing.*

- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Summary should give picture about the contents, aim, and outcomes/conclusions in a concise a qualitative manner (no equations, pictures, numerical values).
- Table and figure captions should describe the contents in a concise manner. Give the detailed explanation in text and refer there to the table or figure.
- Define/explain all symbols after (near) their first occurrence in an equation/expression/figure etc.
- Equations should be considered as parts of sentences (even if positioned on a separate line) and all rules for, e.g., using commas and periods apply.
- Number the equations, (n) flushed right on the same row, and refer to equations by their numbers in parenthesis (n)
- Lengthy and detailed derivations (compared with the generic degree of details of the presentation) should be given in an appendix. Give and explain only the cornerstones of the derivation in text.

Group J *Likely to be accepted in the present form: Results are there. Explanations in “methods” should be elaborated. Discussion about the effect of the parameters is missing.*

- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)

- Symbols should be italicized. Units should not be italicized.
- Be consistent with the fonts as well as their styles and sizes
- The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.

Group K *No report*

Group L *Likely to be accepted in the present form: Results are there. The roles of dimension analysis and analytical method are unclear. Design formula is not discussed.*

- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Symbols should be italicized. Units should not be italicized.
- Be consistent with the fonts as well as their styles and sizes
- The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.

Group M *Likely to be accepted in the present form: Results are there, but explanations should be elaborated a lot. The polynomial fit to experimental data should be reconsidered.*

- The report should be detailed enough so that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- Explanations of the methods should be such that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- The object structure (picture), its idealization and geometrical/material parameters should be explained in its own section before analysis.
- The report should contain tables, figures, equations, and references.

Group N *Likely to be accepted in the present form: A very good report already*

- Symbols should be italicized. Units should not be italicized.
- Do not give the same information in a table and in a figure (give the table in an appendix if you want to keep both)
- Number the equations, (n) flushed right on the same row, and refer to equations by their numbers in parenthesis (n)
- Equations should be considered as parts of sentences (even if positioned on a separate line) and all rules for, e.g., using commas and periods apply.
- Do not use the concise implication or equivalence (mathematical) notation (\rightarrow , \Rightarrow , \Leftrightarrow , \Leftarrow , & etc.) Instead, use “giving” etc. and correctly structured sentences in derivations.
- Avoid bulleted lists as non-standard elements of technical reports

Group O *No report*

Group P *Likely to be accepted in the present form: All results are there. Consider division into sections/chapters to improve readability. Summary should be improved.*

- Summary should give picture about the contents, aim, and outcomes/conclusions in a concise a qualitative manner (no equations, pictures, numerical values).
- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the report, structure of the reports (optional).
- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Define/explain all symbols after (near) their first occurrence in an equation/expression/figure etc.
- Use division into sections/chapters to improve readability

- Explanations of the methods should be such that a reader, having some background in experiments and engineering models, is able to follow the derivations and repeat the steps.
- Table captions should be placed above and figure captions below.
- Symbols should be italicized. Units should not be italicized.

Group Q *No group*

Group R *No report*

Group S *May not be accepted in the present form: Abaqus results are not given, Report is not complete.*

- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the report, structure of the reports (optional).

Group T *Likely to be accepted in the present form: All results are there. Abaqus explanation is not clear. There is no discussion about the effect of parameters.*

- The aim should be consistent with the assignment and the structure of the report should reflect the aim (somehow)
- Introduction usually contains some explanation of the context, earlier studies/references (optional here), aim of the report, structure of the reports (optional).