

## DOS 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 for finding the displacements”. Be careful to include enough information.

### *Structure, style, formatting*

- Try to follow the structure of the report example and include the elements there in some form.
- The report should contain tables, figures, equations, and references.
- 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 in a concise a qualitative manner (no equations, pictures, numerical values).
- Introduction contains usually some explanation of the context, earlier studies/references (optional here), aim of the present study (is the using of three methods the actual aim?) , and structure of the study (optional).
- The object (structure) and geometrical/material parameters should be explained in its own section before analysis
- 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
- The (*material and*) *methods-results* structure fits well experimental studies but it is less natural in a report where the same object is analysed in various ways (kind of validation study). With the method-results structure, separate the method from results.
- Place the material of introduction to the section for that, comparison of results to the section for that etc.
- Divide text into paragraphs to improve clarity. Avoid very short paragraphs.

### *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.
- 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

### *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
- 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”