

MCHE 201: Introduction to Engineering Design

Pre-submission Checklist for Reports and Presentations

Report Checklist

- Narrative, chronological construction is avoided throughout the entire report.
- No first person is used in the report. Note that this includes referring to yourselves in the third person; constructions like “Team X’s design...” where you are Team X should be avoided.
- The abstract is on a separate page and can be read as an independent document.
- The abstract summarizes what is presented in the report including a concise summary of the key results.
- The abstract is unique to the document. It should not be able to be placed on another report and still make sense.
- Neither the title nor abstract pages are numbered.
- All pages starting with the page of the introduction are numbered.
- The introduction section summarizes the problem to be solved and the engineering challenges associated with it.
- The introduction section ends with a “roadmap” sentence or sentences outlining what is contained in the remainder of the report. Be explicit. For example, “In the next section, ... Then, in Section 3...”
- When talking about the design tools, the most important points from each have been identified and explained to the reader. What your reader should learn from the tool you are discussing is clearly identified, focusing on how the most important parts from it influence the design.
- Alternative concepts are explained well enough (and figures high-enough quality) for your reader to understand them completely. This is especially important when you are presenting a concept evaluation. Without a full understanding of the alternatives, it is impossible for your reader to follow your concept analysis and evaluation.
- All concepts have descriptive names. It is very hard for your reader to remember which concept is concept 1, which is concept 2, etc.
- Design figures have parts labeled according to their function. Including the material or component in the caption can often be helpful too. Using a spaghetti tower as an

example, Spaghetti is a poor label. Truss is better. Spaghetti Truss is best. For more complex designs, it would be okay (and is often preferable) to label the subsystems on a figure of the full device, then have figures of each subsystem that contain more detailed labels.

- Design figures have key dimensions on them. You do not need to specify bolt sizes, *etc.*, but you do need to give enough information for your reader to understand the scale of your device and its components.
- Figure numbers and captions are below the figures. All captions are descriptive.
- Table numbers and captions are above the tables. All captions are descriptive. As a rule of thumb for this class, if the tool was created in Excel, then it is a table. Otherwise, it is a figure.
- Landscape figures and tables should have their bottom to the right.
- Figures and tables are numbered and included (or attached, if they are at the end of your report) according to the order they are referenced and discussed in the text. For example, Table 1 should be attached between Figures 3 and 4, if that is where it is discussed in the text.
- If they are included inline with the text, all figures and tables are placed at the top or bottom of the column of text in which they appear. Since the reports in MCHE201 are all single-column format, this means that figures and tables should be placed at the top or bottom of the page on which they appear.
- Figures and tables are crisp and free of any compression artifacts (*i.e.*, Lines and text are not blurry, even when zoomed in on the PDF, and can be easily read.).
- No figures or tables are included that were not referenced and discussed in the text.
- The conclusion section summarizes what was presented in the report including a concise summary of the key results. No new information is included.
- Reference material, images, and ideas that are not your own are all properly cited and included in a References section.

Presentation Checklist

- The template chosen is “clean” and free of any distracting and/or wildly colored background.
- The title slide includes team information, including team member names.

- There is no gratuitous use of animation. Where animation is warranted, *appear* or a quick *dissolve* or *wipe* are usually most appropriate.
- All slides following the introduction slide are numbered.
- The problem to be solved and the engineering challenges associated with it are concisely summarized early in the presentation.
- All design tools and figures included are easily read. Note that this means that you may need to prepare “presentation” versions of many of your figures and tables.
- A conclusion slide is included and summarizes what was presented.

Presentation Video Checklist (in addition to the presentation points above)

- The video has audio, and it is clear.
- The file has been uploaded to vimeo according to the MCHE201 instructions posted at http://crawlab.org/classes/MCHE201_Sp19/Projects/MCHE201_VideoGuidelines.pdf
- The total presentation video length, as shown on vimeo after uploading, is less than the length outlined in the assignment handout, plus 30 seconds, as outlined in the link in the previous point.

Submission Checklist

- The report file is an appropriately named PDF.
- The report filename matches the formatting outlined in the assignment handout. This is generally something like `TeamX-MCHE201-NNN.pdf` where the X in `TeamX` is your team number and NNN is an abbreviation corresponding to the assignment.
- The email subject line matches the formatting outlined in the assignment handout. This is generally something like `TeamX-MCHE201-NNN` where the X in `TeamX` is your team number and NNN is an abbreviation corresponding to the assignment.
- A working vimeo link to the video presentation is included if the assignment handout asks for reports and presentations to be submitted via the same email (most will).
- The video has been verified as publicly viewable on vimeo prior to sending the submission email.
- All team members are copied (CC'd) on the submission email.¶

Changelog:

12/11/17 – Clarifications and additions based on Fall 2017 report submissions.

01/10/19 – Clarifications and additions based on Fall 2018 report submissions. Update to checkbox styling.