



ME450: CHECKLIST FOR ASSIGNMENT #4: β -PROTOTYPE & EXPO

The β -Prototype is due at the Design Expo. Each team should prepare the following:

- 1- A formal poster for their Project. This should be a concise overview of the Design, with detailed information on critical aspects of the Design, such as measured performance, etc.
- 2- A β -Prototype for display at the Expo
- 3- A comparison with the α -Prototype (photos, functional evaluations, or even original hardware)
- 4- A final Design Report (see checklist below)

Checklist:

- _____ β -Prototype
- _____ Poster for the Expo
- _____ Peer Evaluation form #4, from the web page (to be filled out confidentially by each team member)

Final Report (the Final Detailed Design of the β -Prototype + Engineering Notebook), including:

- _____ The Redesign Plan: What did you fix and why? Be concise (1 page or less). This includes any planned "fixes" that you were unable to accomplish in the allotted time or within the allotted budget.
- _____ At least one Engineering Change Notice (ECN): a one-page description showing a hand-drawn sketch of the original design of a component (titled: "WAS"), the new design (titled "IS"), and a brief explanation for the change. Include only the relevant details of the component.
- _____ A quantitative evaluation of the performance of the β -Prototype compared against the α -Prototype. This must include:
 - _____ The Functional Metrics defined in Assignment #1, comparison against the Detailed Design Spec.
- _____ Final set of 3-view drawings of parts that were made in the shop, based on the redesign (electronic copy: originals, plus bitmaps in a portable format, e.g. *.PDF).
- _____ Final assembly drawings for your design.
- _____ At this point, you should provide all electronic drawings (not hand sketches) in at least two formats:
 - (1) The original CAD files using UniGraphics (or other appropriate software & file type)
 - (2) A "universal" file type, such as Adobe PDF, so that someone, including YOU, can look at the images later, even if the original software used to create them is not available.
- _____ A copy of all Unigraphics Drawing files related to your design, burned on a CD-ROM.
- _____ A final Bill of Materials (BoM): components and materials that you used purchase. Include:
 - _____ Part or material description; vendor; part #; quantity; cost; alternative sources (if any).
- _____ An final Gantt Chart: show your original, updated, and actual time lines, including the redesign.
- _____ The Engineering Notebook: every scrap of paper related to the design project, starting from Day #1, including copies of invoices, sketches of design concepts, photographs, notes taken during meetings with sponsors, etc... Put all this stuff into a reasonably well organized binder. Scan in everything to create a permanent digital record.
- _____ You should add a brief paragraph at the beginning, describing the Design Project objectives and outcome, and listing the sponsor and Design Team members. In one large, well-organized file, this constitutes your "Final Report".
- _____ Upload the final and complete version of the design files & Engineering Notebook to the Design Portal.
- _____ Burn on CD-ROM the same set of files: the final and complete version of the final design files & Engineering Notebook. Give a copy of this to both your Sponsor and your Section Instructor.