

PHASE 4 ~ MANUFACTURING

Deliverable 22 ~ Manufacturing Report & Presentation

Due Date: <http://rrq.utk.edu/resources/BME469/assignments.html#Deliverable22>

INSTRUCTIONS. Present your working prototype to the stakeholders and instructors; in addition, write a manufacturing report. Your presentation slides and written report are due electronically to Dr. Jeff Reinbolt (reinbolt@utk.edu) and should be included in your design history file as well.

Purpose

A manufacturing report is an opportunity for the design team to present and evaluate their efforts to manufacture the new product, or working prototype at this point.

Critical Information

The manufacturing report details how the team made a working prototype of the product which they have designed. There should be sufficient detail. The manufacturing report should contain information about facilities, materials, equipment, personnel, storage, logistics, and any other sub-process that was necessary to create and manage manufacturing processes to generate a working prototype.

Oral Presentation

The design team is responsible for scheduling the presentation room, inviting and ensuring attendance of participants, and presenting the material.

- SCHEDULING
 - The presentation must be scheduled and completed on or before the written report due date of April 5th to allow adequate time for editing the report to reflect resolved issues identified during the presentation
 - Generally, the room should be scheduled for at least 30 minutes, the presentation should be no more than 15 minutes and allow ample time for audience questions
 - You should contact Pam Ward in DO 414 to schedule a room
 - Do NOT wait to schedule the room!

- PARTICIPANTS
 - Project stakeholders, drivers, supporters, and observers
 - Senior design instructors (at least Dr. Hamel and/or Dr. Reinbolt)
 - A presentation without stakeholder(s) and/or instructor(s) is NOT acceptable
 - You may find online scheduling resources (e.g., www.doodle.com) helpful

- PRESENTATION
 - The presentation should cover material similar to the written report described below
 - The presentation should be approximately 15 minutes long and no longer than 20 minutes (leave time for a question & answer period)
 - Regardless of the room scheduled, the team should practice the presentation in the scheduled room, use the projector and laptop which will be used on the presentation day, and be familiar with your presentation slides and equipment

Format of the Written Report

The written report should include (*but is not limited to*) the following details:

1. MANUFACTURING OVERVIEW

- This is a high-level description of the manufacturing process
- This overview describes the different steps which are involved in the fabrication of the working prototype
- Think of it like your response to the question, **"How was your working prototype made?"**

2. MATERIALS & COSTS

- Provide a list of materials used to construct the working prototype
- This would be everything that would have to be ordered (or already ordered), aside from available tools, to make it again
- Include material costs for each item as well

3. MANUFACTURING

- The steps taken to manufacture the working prototype
- This may include block drawings, Gantt charts, or a work breakdown structure description of the manufacturing
- Discuss your manufacturing methods and how you solved the problems encountered in your manufacturing.

4. WORKING PROTOTYPE

- Demonstrate your manufactured prototype works
- Describe how the working prototype has been made to some or all of the manufacturing specifications (Phase 3)
- Describe how the working prototype fulfills some or all of the design requirements to properly function as planned (Phase 2)
- Describe how meets some or all of the assessed stakeholder needs (Phase 1)