Design Report Components

(approved project-specific outline with lead instructor & client by April 7th)

# Letter of Transmittal (could be text of an email)

* Addressed to sponsor, interested parties
* Says “here’s an (interim, final) report on the XYZ project”
* Provide appropriate acknowledge for sponsor support

# Cover Page

Title, Authors, Contact Info, Logos

# Front Matter

## Table of Contents

Make it easy for people to find things

* For headings, look at the Report Body section below

## Executive Summary – ½ page

A short, powerful synopsis

* Intro sentence: what you are designing
* Needs -> Features of solution -> Benefits
* Pivotal technical and business merits
* Summary of quantitative test results

# Report Body

## Background – ½ page

* Describe sponsor motivation for the work
* Identify the need/opportunity associated with this project
* Summarize benefits to different stakeholders

## Problem Definition – 1 page

* Outline project goal(s) and deliverables
* Inventory specifications & constraints (preferably in table format w/units & target values)

## Project Plan – 1 page

* Describe team roles & responsibilities
* Discuss intended and actual Schedule (reference Gantt charts in Appendix)

## Concepts Considered – 3+ pages

* Summarize seminal original ideas as well as those derived from other sources

(Don’t lead reader down dead ends, emphasize only feasible ideas that could work)

* Provide critical supporting data/measurements (with further details in Appendix)

## Concept Selection – 1 page

* Describe your process for arriving at final selections
* Include morphological charts, decision matrices as appropriate

## System Architecture – 2+ pages

* Describe the conceptual design – justify continued development
* Describe the components and how they are integrated
* Highlight novel features – your “value added”
* Explain how does each major component satisfy requirements

## Design Evaluation – 2 pages

* Analyze DFMEA against project specifications (1-2 page Excel document included in Appendix)

(define scoring rubrics, assess design risks, and summarize key ideas for remediation)

* Explain product testing procedures
* Sustainability assessment
* Provide results from product performance testing

## Future Work – 1 page

* Make recommendations for sponsor in project adoption/implementation
* Identify features that didn’t find their way into the current design
* Estimate scope, duration, and cost of the required next steps

# Appendices

Supporting documents to long or detailed for main body

* Calculations, drawings
* Large tables, figures
* Computer programs
* Vendor data sheets
* 1-page Project Schedule in Excel (as originally planned at start of project)
* 1-page Project Schedule in Excel (as executed at end of project)
* DFMEA worksheet
* Overview of folder/file organization on shared drive