

The purpose of this document is to guide your development of a kaizen DMAIC Project and the required report that documents your use of the DMAIC cycle in conducting the project. There is no restriction in the topic of the project.

You must professionally document your use of the Define, Measure, Analyze, Improve, and Control cycle during an actual project that you conducted in order to meet the three credit hour IENG 451 course requirement. As a report, it is expected to meet the technical writing standards of the engineering profession, as well as competently and concisely covering the subject material as described below. The grade submitted for this course will reflect the submitted report, the VSM assignment, the midterm and final exam grades. The project may be done with a team or individually.

The DMAIC Project Report is a stand-alone document, separate to any other required project report. The order (and description) of each of the component parts of the report are as follows:

Cover Page - With project title, author (and any other team members), and date of submission.

Introduction - Include an overview of the general problem area and operations. Briefly discuss the project thrust. Conclude this section with a sub-section heading for the ***Problem Statement***, which is a concise description of the problem(s) that were addressed by your project. What was wrong? Who was being affected? etc.

DMAIC Methodology - This descriptive section will have sub-section headings for each of the ***Define, Measure, Analyze, Improve, and Control*** steps of the process. Concisely and adequately describe your rationale, efforts and results for each stage. This section should include pertinent references, appropriately cited in your reference section (later). Describe how you approached the problem - methods and assumptions, analysis techniques used, data sources. Why did you choose your approach? You are expected to make and justify your choices and assumptions in areas where information was unclear or process knowledge was insufficient.

Discuss the functioning of your project efforts and their sensitivity to use conditions. Discuss the functional and expected results/project outcome(s). Introduce and describe appropriate equations, graphs and charts in these sections; but detailed printouts or extensive calculations should be put in an appendix. Remember, all pertinent information must appear within the body of the report. The reader should only need to refer to the appendices to get more detailed information.

Recommendations, Conclusions and Acknowledgments - Summarize the project outcome(s) and suggest further actions that you foresee being necessary. Remember to thank those persons that provided data, effort, or expertise to your project.

References - (Including oral conversations, listed as "Personal Communication".) Note, citations should be made throughout your report where appropriate.

Appendices – Forms, illustrations and charts, if allowed. Also summarize and/or document data collected and their sources.

DMAIC Project Reports are due by 1:00 PM, 30 calendar days from the last day of Finals in the registration term.

It should be submitted in electronic format, as a pdf file.