

SDSU ME310 REPORT FORMAT FOR PROJECT 2

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The following sections are required as part of your report. The final report must be typed and saved preferably as a pdf, though if you have problems generating one you may submit a .docx.

Remember there is no length requirement. Use only as many words as you need to clearly explain and define things. Quality is more significant than quantity.

The contents are essentially organized below, but nothing new is added here - this isn't in addition to the original project description. Refer back to the project description for details on content beyond anything described below.

Remember the draft is not going to be complete obviously, but the more you put into it now the less you'll need to put in later. The draft should be a decent one, not ripped up poorly written pages that clearly had no effort and miss most sections. The final report should be nicely formatted and typed as much as is reasonable. Scans should be clear and professional looking (ie cell phone photos must be taken with good light and well cropped, using a scanner is preferred but I understand you may not have access to one).

Requirements are below:

1. TITLE PAGE

Include project number, class, semester, school, instructor, your names, redids, team descriptor (alphabetically listed last names put together into one word) the date, and a name for your device.

2. TABLE OF CONTENTS

A list of the contents with section titles and page numbers

3. INTRODUCTION

3.1. Project introduction. This should be an introduction to the project, a few sentences introducing what it is about.

3.2. Document description. Also include in this section a description of this document and its purpose. Typically in engineering practice you will document your work, and each document needs to have at least a brief description of its purpose.

4. ENGINEERING SPECIFICATIONS

From the project description, you should have drawn up engineering specifications from which you created a design approach. Please list them here. The format of your list is up to you, but must be clear and organized. The specifications include specific requirements

5. DESIGN DESCRIPTION

This should be a brief description of your design approach to the problem.

5.1. **Functional description.** How the machine works, how to interface to it, make any adjustments for aim, etc.

5.2. **Mechanical Design.** Drawings, descriptions, specifications. See project description.

5.3. **Electrical Design.** Schematics of electrical components and interconnections - a single drawing should suffice. The drawing can be done using any drawing software you desire, or clean hand drawn (using rulers for straightness). I recommend one of the many free software packages such as Eagle, Orcad, Kicad, The circuits you are drawing are fairly basic but a tutorial of a few will be provided. A simple google search will provide options. The draft turn in can be simplified.

5.4. **Aesthetic design.** How are you packaging the system together into a single unified system? What features contribute to this overall component?

6. ANALYSIS

Support your design with any analysis you can. Compute the trajectory of the ball, perform analysis and synthesis to describe the design development. See the project description for details.

7. RESULTS

Photos, numbers, statistics. Support your design with results - how well does it work? How precise and how accurate is it? What can be improved?