School of Mechanical Engineering

Design & Build Competition
2015

Where’s my coffee?!!

Event organiser: John Codrington

REPORT WRITING

Lecturer: Lloyd Fletcher
Acknowledgements

➢ This lecture material belongs to:
  • Dorothy Missingham
Design & Build Competition 2015

Task for 2015

- Build a vehicle to deliver a mug of coffee.
- Best Report = $250!
Why is a report needed?

- Improvement of any engineering design relies on a well documented design process!

- Did I mention best report gets $250
Report Specification

- **Length:**
  - 2 pages of text (not including: title page, appendices, in text figures or tables)

- **Things you can (and probably should) include:**
  - Sketches or CAD drawings of your prelim designs and final design
What is the report structure?

- Title page
- 1. Introduction
- 2. Preliminary designs
  - 2.1 Preliminary solution
- 3. Testing, evaluation and modification
- 4. Final Design
- 5. Conclusion
- References
Title Page: Why is it important?

- How will I know who to give the prize money to?

- Include:
  - Name of University
  - Name of School
  - Name of Event (ex: Design and Build 2015)
  - Title of report
  - Names and ID numbers of **ALL** team members
  - Team number
Introduction

- **Problem statement**: What problem does your design intend to address? Why is this important?
- **Aim**: Design a contraption to deliver coffee
- **Objectives**: These are your design goals
- **Significance**: Everyone likes coffee!
- **Scope**: Are there any limitations on the design?
Preliminary Designs

- Discuss and evaluate design alternatives
- Provide some comparative analysis of each of the design alternatives
- Description is not enough!

Preliminary Solution:
- Which one of your prelim designs is best and why?
- Sometimes the solution is a combination of features from your prelim designs
Testing and Evaluation

- Provide details of any testing and the results of the testing

- Did the testing lead to any unexpected outcomes?

- Did this cause you to modify or re-evaluate your design choices?
Final Design

- A description of the final design (after any modifications)

- CAD, hand drawn sketches or photos of the final design
Conclusion

- Summarise your design process

- Relate back to your aims and objectives
  - Did you achieve them?
Reference List

- Use the Harvard author/date system
  - Ask your mentors/team leader about this as they should be familiar with this referencing system

- Bonus points for referencing journal articles!
Formatting

- Use numbered section headings
  - Example: 1.0 Introduction

- Make it clear and easily readable
Language

- Use formal written language

- Use language that focuses on the information (i.e. passive language that focuses on the information avoiding ‘I’ or ‘we’)

- Avoid personalisation, slang, jargon, colloquial language
Good luck

- and have fun!