

Personal Reflections Report Template

Name

Email Address

Project Groups you worked on

Faculty Advisor

Date

Topics covered: keyword, keyword, etc.

- This is very important for searches in the database and for people who want a very quick idea of what is covered in your personal reflection. It is better to give too many keywords than not enough.

Introduction:

- Briefly explain the design project and *your role on the team* including what teams and projects you worked on this year

Semester Summary:

- Summarize all the work you did year, including organization, design work, manufacture, and development.
- This should be non-technical.
- Remember be honest, you are not going to be graded on how good your paper makes the work you did this semester look.

Post Competition Thoughts:

- How did the team perform at the competition? Did we work together?
- Describe what you learned by looking at other teams' projects, talking to students from other teams, judges, alumni, and/or industry representatives.

Comments and Recommendations:

- Comment on how you feel things went this year. Things you did and didn't like.
- What can you suggest to improve the organization of the team for next year?
- If you were a team leader next year what would you do differently?

Reflections:

- Describe some particularly useful thing you learned this term and how you learned it. Describe any team dynamics and relationships that helped/hindered your team experience and

- make suggestions on how this can be improved in future years.
- What did you learn that you can pass on to future years' teams?
- Rank the usefulness of the following resources to your learning on the team in general (rank at least the five most important: 1 = most important. etc.)
 - _____ Looking at previous years' projects and parts
 - _____ Asking former team members
 - _____ Asking existing, more experienced team members
 - _____ Asking existing, less experienced team members
 - _____ Asking a faculty advisor
 - _____ Informal team meetings
 - _____ Formal team meetings and mini-lectures
 - _____ Manufacturers literature
 - _____ Books
 - _____ Technical papers
 - _____ Past reports (paper copies)
 - _____ Past reports (electronic copies)
 - _____ Other - please indicate what _____

Annotated Bibliography:

- *List the relevant complete references (books, papers, previous reports, industry contacts, alumni info, etc.) and add a sentence or two after each reference telling your opinion of it and what parts you recommend/do not recommend to future team members.*

Note that all pertinent technical references and contacts should be in the sub-team technical reports. This personal report bibliography is for general contact info (such as helpful team alums), management/organizational references, and general purpose books.

Books:

Gere, James M. *Mechanics of Materials*. Pacific Grove. Brooks/Cole, 2001.

This book is not as good as Machine design but I bought it for 202 so it was around my room and easy to find. This is where I took the moment area method from so it might be the best source for reviewing my work/checking for errors.

Dixon, John C. *Tires Suspension and Handling*. London. SAE International, 1996.

I have not read this book in its entirety but I have read some of the sections pertaining to tires and anti-roll. It is a good source of general data much like Race Car Vehicle Dynamics, but not quite as good in my opinion.

Milliken, William F and Douglas L. *Race Car Vehicle Dynamics*. Warrendale. SAE

International. 1995. This is the best general purpose book for the Formula SAE team member. Though not all the topics are covered in great depth it does a pretty good job of laying out the basics and has a good collection of formulas.

Norton, Robert L. *Machine Design*. Toronto. Prentice-Hall Inc, 1996.

This is a very good book. I learned all about stress, strain, and deflection by reading this

book before I had it in 202 and a large portion of what I learned wasn't covered in the class

Team reports:

Nick Kruczynski's 2002 Anti-Roll report- this is the better of the two reports, I though it was very good when I first read it, but working on the designing the anti-roll for a semester it seems barely adequate, it does have a good history of the anti-roll successes and failures on the cars previous to 2002.

Erik Carleson's 2003 Anti-roll report- you need to read this report for the sake of keeping a knowledge of the anti-roll design history, but don't expect to learn any great unknown theory or insights

Websites

Parker O-Rings, www.parker.com

Parker is a major manufacturer of o-rings. You cannot purchase o-rings directly, but as a manufacturer, they provide a high level of information on o-rings for application and material selection. In particular, the charts on o-ring selection are very helpful. Some excerpts have been included with the hard copy, but the pdf can be accessed at www.parker.com/o-ring/Literature/09-5700.pdf

efunda.com, www.efunda.com/DesignStandards/oring/oring_intro.cfm

Website has comprehensive background on computing o-ring specifications, groove dimensions, chemical resistance, stretch and squish. Best collection of calculations available.

SAE Papers:

Lawrence Technological University FSAE, SAE Technical Paper

Series 2002-01-0457, Badih A. Jawad, Jeffrey P. Hoste, and Brian E. Johnson

This paper details the team's development of a dual plenum to vary the plenum size based on the RPM range. It was developed for their 2001 car. They were able to slightly improve power and torque by controlling valves between the plenums. While the design work is not overly useful, the appendix includes a number of calculations for Helmholtz tuning. These equations were used to create a spreadsheet for optimization of plenum size and runner length.