UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

School of Electrical and Information Engineering

ELEN417/455 - Elec/Info Engineering Laboratory

Paper Guidelines

Introduction

Every student is required to submit a four to six page paper describing the work that they have performed. This document gives eleven important guidelines that must be adhered to when writing the paper.

1 Different Students — Different Papers

You are required to work in pairs for this course and split the project work fairly between each partner. Your paper should focus on your unique contribution to the project. You should give a brief overview of the entire project in order to contextualise your contribution, but majority of the paper should be devoted to describing your own work. Choose a subtitle that accurately describes the work that you have performed. This will probably be more specific than the overall project title. In the author's section only a single name should appear — yours.

2 Paper ! = Appendices

Your paper should not simply be a rehash of one of your appendices. It is different because it gives a concise overview of your work. Your appendices will contain extra detail which is not present in the paper. Also, your paper should not be based on a single appendix but should draw and summarise information from many (possibly all) of your appendices.

The paper is arguably more difficult to write than any of the appendices because of the constraints on space and the fact that you are required collate a variety of information into a cohesive whole. We recommend that you write the paper last.

3 Leave the Appendices Behind

Your paper has to be submitted along with various appendices; however, your paper needs to stand on its own. This does not mean that you cannot cite and reference (in the normal way) any of your own or your partner's appendices, but it does mean that the reader is not required to have to read those appendices in order to understand the content of your paper.

An example of citing and referencing an appendix is as follows:

> Many students miss the deadline owing to printer issues [1]. It is therefore not advisable to leave the printing of your report till the last minute.

References

[1] A. E. Neuman. "Printer Jams and Project Deadlines: A Correlation of Two Phenomena." 4th Year Project Report 04P28, School of Electrical and Information Engineering, University of the Witwatersrand, South Africa, 2004.

4   The Devil Is In The Details

A key indicator of a good paper is the abstract. The abstract should succinctly convey the work performed, the results achieved and so on. The abstract should not be couched in general terms, rather it should be specific and precise. Refer to the School's Communications Manual for more detail on how to write an abstract.

"This work was completed as part of a 4th year laboratory project." is never appropriate in the abstract or anywhere else.

5   It's All About Balance

A common mistake is to be overly enthused about how useful or successful your work actually is. A good paper describes both the strengths and weaknesses of the work that has been done — a balanced approach is *critical*. You want to come across as convincing instead of overtly persuasive.

6   Deal With the Tough Stuff

It's very easy to write reams of text introducing your project and the defining the specification. It's a lot harder to motivate and describe your particular design, present the results you achieved, and critically analyse and evaluate these results. In particular, most students fall short on the critical analysis and evaluation. Review a rough draft of your paper and if you see lots of introduction and specification and very little analysis and evaluation then it's time for a re-write.

7   Don't Point Fingers

In the paper we are not interested in reading about which parts of the project you did and which parts your partner did. Save this for the appendix entitled "Reflection on Group Work". We assume that your paper focuses on your own contribution.

8 The Assessment Guide Is Not A Set Of Section Headings

Avoid section headings like: *Success Criteria*, *Constraints*, *Assumptions* and so on. There is no cast-iron formula for writing a good paper, and the assessment guide does not attempt to present one. It is obviously important to address these issues but they should arise naturally during the course of your discussion. Inappropriate and overuse of section headings breaks the flow of your discussion, makes your writing seem forced and results in a paper that is less enjoyable to read.

9 A Blow-By-Blow Account is Painful

You write your paper at the culmination of the project. This gives you the opportunity to review what you have done and selectively present the work. Typically, you will avoid discussing mistakes that were made and dead-ends that you ran into (unless they are of interest in their own right). The reader does not want to be distracted by details that do not add value to your results, analysis and conclusion. Your paper is not a diary, instead it is a lucid presentation, written with hindsight, of the work performed.

10 A Picture Says a Thousand Words

(Although sometimes a word says more than a thousand pictures.)

Provide good quality diagrams and tables which help to illustrate the points that you are trying to make. Producing good diagrams takes time and requires planning. Be selective about what you present as cluttered diagrams are not that helpful. Make sure that your diagram fonts are legible and position your diagrams at the tops or bottoms of pages. Coloured diagrams are acceptable as long as they print out decently on a black and white printer. Refer to the School's Communications Manual for additional guidance on these matters.

11 Meet the Formatting Requirements

Enough said.