APPENDICES

1 References
2 Hints on Lab Reports
3 Oral presentation format, hints and grading

APPENDIX A1 REFERENCES


APPENDIX A2 HINTS ON LAB REPORT

Diagrams, Graphs, & Tables:
The reason for putting diagrams, graphs and tables in a report is to organize information so that it can be easily understood. However, the point that you want to convey in a diagram, graph or table may not be obvious to the reader or grader. You have to tell the reader or the grader what point you want him or her to see in the diagram, graph or table so that he or she doesn’t miss that point. A good rule of thumb is to write 2 or 3 sentences for each diagram, graph or table to explain or describe the diagram, graph or table.

Figures:
Try to size figures so they fit upright on the page. If you have to turn them sideways, remember that the top of the figure goes to the left of the page.

See the examples below.

Binder:
The reports submitted are to have all your group's reports included in a binder. Put the newest in the front. Include the grading sheet with each report. Separate the reports with tabbed separators that are labeled to identify the reports.
"TJe":

This is known as the "Thomas Jefferson Error." This is marked when you write it's when you mean its. Both words are legitimate words, but they mean different things. It’s is the contraction of the two words it is; its is a possessive pronoun that refers to an object.

Contents of "Theory & Background"
(by Jay Ware)

Brief review of system
This should include a schematic diagram of your system with control elements labeled using the standard symbols in the appendix of S&C. The schematic diagram does not have to be pictorial, but is to show the functional relationships among the various components of the system. The block diagram and governing equations or FOPDT equations should be included. Both time-domain and Laplace-domain equations are appropriate. The input and output functions should be clearly defined.

Discussion of Principles behind experiment
This should include the theoretical output for a given input. For examples, the step response for the step input and the steady oscillation response for a sine input. For the control experiments, discuss the theory of P-only or PI control and discuss typical responses. Include tuning parameter equations and discuss how changes in parameters affect the typical response.

Discussion of theory as applied to system
All variables for your system should be defined. Where you know the values of parameters (from previous measurements or reports) these are to be described in this section. You should clearly point out what are the manipulated variable and the controlled variables.

Brief summary of theoretical response
This should consist of an explanation of how the system should respond based on theory. In the "Discussion" section, this theoretical response should be compared with experimental and/or approximate modelling response.
ENGINEERING LAB REPORT

NAME:___________________________REPORT DATE:___________________________

GROUP:___________________________TITLE:___________________________

CONTENT (50%)
Title Page -- Name and name of team members?
Introduction -- Clear reason for report?
  Background-enough to follow report?
  Introduces report?
Theory (diagrams, equations, calculations)

Modelling (diagrams, equations)

Results (tables, graphs, calculations)

Discussion (follow from Results?)

Conclusions (follow from Discussion?)

Recommendations

Appendices

Evaluator's recommendations

Total points (out of 50)

FORM (50%)
Appearance (margins, page #s)

Type (size, quality, consistency)

Graphs (clear, consistent)

Tables (clear, consistent)

Diagrams (clear, consistent)

Language (word choice, significant figures)

Total points (out of 50)

OVERALL COMMENTS

EVALUATOR_____________________________ OVERALL GRADE ________________
ORAL PRESENTATIONS

ORGANIZATION
Establish Purpose: What is your objective in making presentation?
Assume your audience does not know anything about your subject.
Write Conclusion First
Outline:
- Introduction
  - Name and name of team members
  - State reason for presentation
  - Background-provide enough to follow talk
- Body
  - Present ideas
  - Include strengths and weaknesses
- Summary
  - Summarize briefly
  - State conclusion
- Questions-be prepared
Select Information Based on Support of Conclusion-KISS

PREPARATION
Visual aids
- Overhead, charts etc. - approximately 1/minute of talk
  - one idea/slide
- Include - title slide
- outline of talk
- conclusion
- Do not have complete sentences on your slides
- Make your letters on the overheads at least 1/4 inch high.
  - If you can't get a printer to do that for you, do it by hand
  - or use the copy machine to enlarge your copy.
- Everything on your slide must be important enough to be there.
  - If it's not important, leave it off. If it's important, make it clear and tell your audience about it.
- Have a balance among the number of slides with words only, those with diagrams or graphs and those with tables
Practice--to have confidence
- Memorize introduction and conclusions
- Make them strong
- Practice out loud to an empty room
- Present to other group members for critique and potential questions.

DELIVERY
Communicate
Stay within time limit
Confidence
Be in control
Maintain eye contact-maintain eye contact-maintain eye contact
ORAL PRESENTATION GRADE

NAME: ___________________________ DATE __________________

GROUP: ___________________________

SUBJECT: ___________________________

CONTENT (50%)

Introduction
  Name and name of team members? ______
  State reason for presentation? ______
  Background—enough to follow talk? ______

Body

Summary

  Summarize briefly? ______
  State conclusion? ______

Questions?

VISUAL AIDS (20%)

Overhead? ___________________________

Include
  - title slide? ______
  - outline of talk? ______
  - conclusion? ______

  # Text slides ______
  # Graphic slides ______
  # Tabular slides ______

DELIVERY (30%)

Confidence

Stay within time limit? start ______ end ______ time ______

Delivery ___________________________

In control/evidence of practice? ___________________________

Maintain eye contact? ___________________________

OVERALL COMMENTS

________________________________________

________________________________________

________________________________________

EVALUATOR ___________________________ OVERALL GRADE ______
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