Quanser Qube 2 – Report

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# Introduction

This document is intended to be both an example of the Polimi WORD template for Master Theses, as well as a short introduction to its use. It is not intended to be a general introduction to WORD itself, and the reader is assumed to be familiar with the basics of creating and compiling WORD documents.

For nay doubt refer to: <https://support.microsoft.com/en-us/office>

Use the English version of Word.

To see properly the format, use the “*Paragraph mark* (Paragraph Show / Hide button in Word)”.

The cover page of the thesis must contain all the relevant information: title of the thesis, name of the Study Programme and School, name of the author, student ID number, name of the supervisor, name(s) of the co-supervisor(s) (if any), academic year. Be sure to select a title that is meaningful. It should contain important keywords to be identified by indexer. Keep the title as concise as possible and comprehensible even to people who are not experts in your field. The title has to be chosen at the end of your work so that it accurately captures the main subject of the manuscript.

Since a thesis might be a substantial document, it is convenient to break it into chapters. Be sure to be confident with “*Style*” and “*Section breaks*”. Chapters titles are identified by the “*Heading 1*” and numbered by “*Multilevel list*” and “*Numbering*”.

To start a new chapter, end the previous one with “*Section breaks-odd page*”.

The header of the first page of the chapter is different from the even and from the odd page of the chapter itself. In the header, a two rows-table (with no-borders) is present: the header in the first page contains the page number (*Insert-Header-Page number*) on the right; the even page contains the page number on the left and the chapter title on the right (*Insert-Quick Parts-Field-StyleRef-Heading 1 and Paragraph Number*).

Chapter title color corresponds to the HEX: #728FA5.

# Model Identification

In this chapter additional useful information are reported.

## Section and subsection

Chapters are typically subdivided into sections and subsections, and, optionally, subsubsections, paragraphs and subparagraphs. All can have a title, but only sections and subsections are numbered. A new section is created by “*Heading 2*” the sub-sections are created by “*Heading 3*” and so on. To number or not the section: *Multilevel list*” and “*Numbering*”.

## Equations

This section gives some examples of writing mathematical equations in your thesis.

Maxwell’s equations read:

|  |  |  |
| --- | --- | --- |
|  |  | (1.1a) |
| (1.1b) |
| (1.1c) |
| (1.1d) |

The equations must be labeled and cited in the text, such as Equation (1.1a), Equation (1.1b), Equation (1.1c) and Equation (1.1d) need to be cited in the text. To automatically name the equations and to cite them use “*References, Insert Caption and Cross Reference*”.

The following Equations (1.2), (1.3), (1.4) and (1.5) show the same equation as before, with multiple global references rather than sub-references and without brace:

|  |  |  |
| --- | --- | --- |
|  |  | (1.2) |
|  | (1.3) |
|  | (1.4) |
|  | (1.5) |

Equation (1.6) is the same as before, but with just one label:

|  |  |  |
| --- | --- | --- |
|  |  | (1.6) |

# Parameters Estimation

# Controllers and state estimation

## Stabilization

## Swing-up

# Validation

# Bibliography

[1] D. E. Knuth. Computer programming as an art. *Commun. ACM*, pages 667-673, 1974.

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[5] T. Oetiker, H. Partl, I. Hyna, and E. Schlegl. The not so short introduction to latex2. *Electronic document available at http://www. tex. ac. uk/tex-archive/info/lshort, 1995.*