Using the document template file for your Engineering Materials Seminar paper

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Abstract— This document serves as a template to illustrate the look and feel of papers for the MEC-E6005 Engineering Materials Seminar course taught at Aalto University, and provide a uniform layout for the collected papers you will receive in PDF format at the end of the course. These styles and the document formatting options such as column spacing and page margins should not be modified.

Your paper should be converted to PDF format before it is submitted.

Keywords— engineering materials, independent reading

# Introduction

This sample file shows what the layout of your paper should be. The template uses document styles to define the formatting. If you want to use LaTeX style sheets instead of a word processor template, that would probably yield better results, especially for mathematical formulas and bibliography management, but we understand that not everyone is accustomed to LaTeX and focused on making a template for Microsoft Word and OpenOffice or LibreOffice instead.

A *double column* style was chosen as this makes the paper easier to read. The column width is 90 mm. In this sample file you will find examples for the layout of displayed equations, tables, figures, etc…

# Getting Started

## Creating a New Paper

The easiest way to generate a new document following the suggested guidelines is probably to edit this template file.

## A template file?

The author of this sample document is certainly no expert in the use of MS Word or open source word processors, as he normally uses LaTeX to write papers.

# Paper Style

## Style Reference

Here’s an alphabetical reference for the styles used in the template. Some, like “Heading 1”, are borrowed from the normal template; others are specific to this template file. Note that paragraphs do not require special styling and should be left with the “Normal” style (10pt Times).

**Abstract**— includes all text for your abstract. Formatting is 9-point bold. (The word “abstract” itself should be italic instead of bold). There is a section break between the author email and the abstract, which starts the two-column layout.

**Affiliation**— provides space for the affiliation of the author(s).

**Authors**— comprises the entire comma-delimited list of authors, starting with the principal author. For this course, there should be just one author.

**Captions**— are on in their own paragraph, before or after a table or figure, respectively.

**Email**— should have contact information for the corresponding author of the paper.

**Heading 1**— is the top-level heading. It is auto-numbered, so you shouldn’t add Roman numerals of your own. Appears centred on the column with small caps.

**Heading 2**— is the second level heading. It is also auto-numbered, so you shouldn’t add capital letters of your own.

**Heading 3**— is the lowest level heading. It is again auto-numbered, so you shouldn’t add Arabic numerals of your own. Note that only headings levels 1 through 3 are supported in the paper style. (Deeper sub-sectioning levels are to be avoided.)

**Keywords**— is for an optional list of keywords. If you supply no index terms, this style should be removed entirely.

**Lists**— Regular, numbered, and bulleted lists are used just as normally. Each entire list receives the list style, and carriage returns within the list area define list items.

**Placed Item**— is a paragraph style intended for equations, tables and figures. If you need one that is wider than a single column, place it in a text box and modify the tab positions.

**References**— are collected at the end, in the reference section (bibliography), a special kind of numbered list. There should be only one *References* style area in your paper. Auto-numbered, so you shouldn’t add numbering of your own. The entire section receives the References style, and paragraphs within the area define individual references. Format the references as in the examples for a journal article [1] and a book [2].

**Title**— should be the first item in the paper. Appears in 18-point Times or Times New Roman type within the same textbox as the author information, across both columns.

## Order of Appearance

Here’s a list of styles specific to the layout in order of appearance:

* Title
* Authors, affiliation, and email
* Abstract
* Keywords
* Heading 1
* Heading 2
* Element
* References

The heading, caption and placed item styles may be repeated as often as necessary.

# Math, Tables, and Figures

In my experience with MS Word, mathematical formulas and referencing were one of the major problems. Microsoft’s Equation Editor is generally adequate for simple formulas, although it can be tedious to use and its layout is not always optimal.

In the paper style the justification of equations should be centred and the numbering should be right justified. For units and notation, we refer to the common guidelines for any scientific work [3].

Here is an example of an equation with some discussion of the variables appearing in it:

$\dot{x=A∙x+B∙u}$ (1)

If *A* is stable, then the pair *{A,B}* is stabilizable. Moreover, this holds for any *B*.

Tables and figures are also centre-justified. Captions for tables should be defined before the table item itself.

This is an example for a table:

Table I
The Caption comes Before the Table

|  |  |  |  |
| --- | --- | --- | --- |
|  | title page | odd page | Even page |
| one sided | leftTEXT | leftTEXT | leftTEXT |
| two-sided | leftTEXT | rightTEXT | leftTEXT |

And here is an example for a figure:

Fig. 1. Sample figure. The caption comes after the figure.

# Acknowledgements

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# References

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