polsl-msth — Silesian University of Technology, Master of Science thesis document class*

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Abstract

The polsl-msth is a LaTeX document class designed for Silesian University of Technology Master of Science Thesis.

1 Usage

2 Implementation

The polsl-msth class is based on the book class.

```
1 ⟨*class⟩
2 \LoadClass[a4paper,twoside,openright,12pt]{book}
3 \linespread{1.3}
```

The babel package is used for internationalization.

```
4 \RequirePackage{babel}
```

2.1 Page layout

Configure margins, 2.5 cm.

```
5 \setlength{\textwidth}{\paperwidth}
6 \setlength{\textheight}{\paperheight}
7 \setlength{\hoffset}{-0.04cm}
8 \setlength{\voffset}{-0.04cm}
9 \addtolength{\textwidth}{-5cm}
10 \addtolength{\textheight}{-5cm}
11 \setlength{\topmargin}{0cm}
12 \setlength{\headheight}{0cm}
13 \setlength{\headsep}{0cm}
14 \setlength{\marginparsep}{0cm}
15 \setlength{\marginparwidth}{0cm}
```

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```
\setlength{\footskip}{0cm}
\setlength{\oddsidemargin}{0.5cm}
\setlength{\evensidemargin}{0cm}
\addtolength{\textwidth}{-0.5cm}
\setlength{\headheight}{12pt}
\setlength{\headsep}{19pt}
\addtolength{\textheight}{-\the\headheight}
\addtolength{\textheight}{-\the\headsep}
```

2.2 Class configuration

2.2.1 Internationalization

```
\def\authordesc{Author}
\def\supervisordesc{Supervisor}
\def\consultantdesc{Consultant}
\def\msthesisname{Master Thesis}
\def\engthesisname{Final Project}
\def\universitydefault{Silesian University of Technology}
\def\facultydefault{Faculty of Automatic Control, Electronics and Computer Science}
\def\@date{\ifcase\month\or
January\or February\or March\or April\or May\or June\or
July\or August\or September\or October\or November\or December\fi
\number\year}
\DeclareOption{polish}{%
\frenchspacing%
\def\authordesc{Autor}
\def\supervisordesc{Kieruj\k{a}cy prac\k{a}}%
\def\consultantdesc{Konsultant}
\def\msthesisname{Praca dyplomowa magisterska}
\def\engthesisname{Praca dyplomowa in\.zynierska}
\def\universitydefault{Politechnika \'Sl\k{a}ska}
\def\facultydefault{Wydzia\l\ Automatyki, Elektroniki i~Informatyki}
\def\@date{%
\ifcase\month\or
Stycze\'n\or Luty\or Marzec\or Kwiecie\'n\or Maj\or Czerwiec\or Lipiec\or
Sierpie\'n\or Wrzesie\'n\or Pa\'zdziernik\or Listopad\or Grudzie\'n\fi
\space\number\year%
}
}
```

2.2.2 Thesis type selection

```
\def\thesisname{\msthesisname}
\DeclareOption{engineer}{
\def\thesisname{\engthesisname}
}
\DeclareOption{master}{
\def\thesisname{\msthesisname}
}
\ProcessOptions*
```

```
⟨/class⟩
```

2.2.3 Configuration example

The user document should include polsl-msth document class and declare language (english or polish) and thesis type (master or engineer).

```
⟨*example⟩
%% Thesis language: english or polish
%% Thesis type: master or engineer
\documentclass[polish,master]{polsl-msth}
⟨/example⟩
```

2.3 Font configuration

Use lmodern font for the thesis

```
⟨*class⟩
\RequirePackage[T1]{fontenc}
\RequirePackage{lmodern}
⟨/class⟩
```

We need graphicx for the logo

```
⟨*class⟩
\RequirePackage{graphicx}
⟨/class⟩
```

2.4 Encoding configuration

This document is written in the ISO-8859-2 encoding.

```
⟨*example⟩
%% set document encoding
\usepackage[latin2]{inputenc}
⟨/example⟩
```

2.5 Title page

`\university` The `\university` macro defines a university. No example is provided, because this class is designed for Silesian University of Technology.

```
⟨*class⟩
\def\university#1{\gdef\@university{#1}}
\def\@university{\universitydefault}
⟨/class⟩
```

`\faculty` The `\faculty` macro defines a faculty. No example is provided, because this class is designed for Faculty of Automatic Control, Electronics and Computer Science.

```
⟨*class⟩
\def\faculty#1{\gdef\@faculty{#1}}
\def\@faculty{\facultydefault}
⟨/class⟩
```

Declare the MSc thesis author. The `\author` macro is provided by the book class.

```
⟨*example⟩
%% thesis author
\author{Jan Kowalski}
⟨/example⟩
```

`\supervisor` The `\supervisor` macro defines a MSc thesis supervisor.

```
⟨*class⟩
\def\supervisor#1{\gdef\@supervisor{#1}}
\def\@supervisor{\@latex@warning@no@line{No \noexpand\supervisor given}}
⟨/class⟩
```

Declare the MSc thesis supervisor

```
⟨*example⟩
%% thesis supervisor
\supervisor{Jan Kowalski}
⟨/example⟩
```

`\consultant` The `\consultant` macro defines a MSc thesis consultant. The consultant is optional.

```
⟨*class⟩
\def\consultant#1{\gdef\@consultant{#1}}
⟨/class⟩
```

Declare the MSc thesis consultant.

```
⟨*example⟩
%% thesis consultant, optional
%% \consultant{Jan Kowalski}
⟨/example⟩
```

Declare the MSc thesis title. The `\author` macro is provided by the book class.

```
⟨*example⟩
%% Thesis title
\title{Przykład wykorzystania klasy polsl-msth}
⟨/example⟩
```

`\maketitle` The `\maketitle` generates a title page.

```
⟨*class⟩
\renewcommand\maketitle{
  \begingroup
    \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
      \newpage
      \global\@topnum\z@   % Prevents figures from going at top of page.
      \@maketitle
```

This page gets a empty layout. We call `\@thanks` to produce the footnotes.

```
    \thispagestyle{empty}\@thanks
```

Now we can close the group, reset the counter, disable `\thanks`, `\maketitle` and `\@maketitle` and save some storage space by emptying the internal information macros.

```
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@supervisor\@empty
  \global\let\@faculty\@empty
  \global\let\@university\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\supervisor\relax
  \global\let\faculty\relax
  \global\let\university\relax
  \global\let\date\relax
  \global\let\and\relax
}
```

⟨/class⟩

`\@maketitle` This macro takes care of formatting the title information when we have no separate title page.

We always start a new page.

```
⟨*class⟩
\newcommand{\@bigfontsc}{\fontfamily{phv}\fontsize{18}{18}\bfseries\scshape\selectfont}
\newcommand{\@bigfont}{\fontfamily{phv}\fontsize{18}{18}\selectfont}
\newcommand{\@helfourty}{\fontfamily{phv}\fontsize{14}{14}\selectfont}
\def\@maketitle{%
\newpage%
\let\footnote\thanks%
\vbox to 22.910474truecm{% 24 cm minus header
\vbox to 17.910474truecm{% 19 cm minus header
\vbox to 32mm{
\vfill%
\centerline{\includegraphics[width=29mm]{pi}}
}
\vspace{1cm}
\begin{center}
\@bigfontsc \@university
\end{center}
\begin{center}
\@bigfontsc \@faculty
\end{center}
```

```
\vfil
\begin{center}
\@bigfont \thesisname
\end{center}
\vfil
{
\setlength{\baselineskip}{1.5\baselineskip}
\begin{center}
{\@helfourty \@title\par}
\end{center}
}
\vfil
}%
\noindent\vbox{%
\hbox{{\@helfourty\authordesc:} {\@helfourty \@author}}
\vspace{12pt}%
\hbox{{\@helfourty\supervisordesc:} {\@helfourty \@supervisor}}
\ifx\@consultant\undefined\else{
\vspace{12pt}%
\hbox{{\@helfourty\consultantdesc:} {\@helfourty \@consultant}}
}
\fi
}
\vfill%
}
\centerline{\@helfourty Gliwice, \@date}
}
```
⟨/class⟩

`\makestatement` This macro adds a statement about

```
⟨*class⟩
\def\@makestatementdots#1{\hbox to #1{\cleaders\hbox to 0.8ex{$\hss.\hss$}\hfill}}
\def\makestatement{%
\cleardoublepage%
\let\footnote\thanks%
\vbox to 1.8cm{}
\centerline{\large\,\bf\,O\,\'S\,W\,I\,A\,D\,C\,Z\,E\,N\,I\,E}
\vspace{1.55cm}
\noindent Wyra\.zam zgod\k{e}/nie wyra\.zam* zgody na
udost\k{e}pnienie mojej pracy dyplomowej/rozprawy doktorskiej*

\vspace{2.3cm}
\noindent \@makestatementdots{4.5cm}, dnia \@makestatementdots{4.5cm}

\vspace{2.9cm}
\hfill \@makestatementdots{7.2cm}

\hfill \hbox to 7.2cm{\hfill\scriptsize \it (podpis)\hfill}

\vspace{1.3cm}
```

```
\hfill \@makestatementdots{7.2cm}

\hfill \hbox to 7.2cm{\hfill\scriptsize \it (po\'swiadczenie wiarygodno\'sci
podpisu przez Dziekanat)\hfill}\\

\vspace{1.5cm}
\noindent * właściwe podkreślić
\vfill%
}
⟨/class⟩
```

`\chapter` Change `\chapter` macro to use empty style on first page of chapter.

```
⟨*class⟩
\renewcommand\chapter{\if@openright\cleardoublepage\else\clearpage\fi
                      \thispagestyle{empty}%
                      \global\@topnum\z@
                      \@afterindentfalse
                      \secdef\@chapter\@schapter}
⟨/class⟩
```

Add title page to example.

```
⟨*example⟩
\begin{document}
\frontmatter
\maketitle
⟨/example⟩
```

2.6 Table of contents and lists

```
⟨*example⟩
\tableofcontents
\listoftables
\listoffigures
⟨/example⟩
% \end{macrocode}
% \subsection{Example}
%    \begin{macrocode}
⟨*example⟩
\mainmatter
\chapter{Wprowadzenie}
Dokument ten opisuje wykorzystanie klasy polsl-msth do przygotowania
pracy magisterskiej na Wydziale Automatyki, Elektroniki i~Informatyki
Politechniki Śląskiej. Sam dokument jest
też zgodny z~szablonem pracy magisterskiej.

W~rozdziale \ref{zalecenia} znajdują się zalecenia odnośnie formatowania
pracy.

\chapter{Zalecenia\label{zalecenia}}
```

```
Pierwszy akapit rozdziału, sekcji lub podsekcji powinien rozpoczynać
się bez wcięcia. Wszystkie kolejne powinny mieć wcięcie skonfigurowane
w~klasie.

Opis rysunków powinien znajdować się pod rysunkiem jak w~przypadku
rysunku \ref{pi}.
\begin{figure}[hbtp]
\centerline{\includegraphics[width=1in]{pi}}
\caption{Logo Politechniki Śląskiej.\label{pi}}
\end{figure}

Opis tabel powinien znajdować się nad tabelą jak w~przypadku
tabeli \ref{tab}.
\begin{table}[hbtp]
\caption{Przykładowa tabela.\label{tab}}
\centerline{\begin{tabular}{|c|c|}
\hline
1 & 2\\
\hline
3 & 4\\
\hline
\end{tabular}}
\end{table}

Równania powinny być numerowane jak równanie \ref{entropy}.
\begin{equation}
H(X) = -\sum_{i=0}^n P(x_i) \log_2 P(x_i).\label{entropy}
\end{equation}
```
⟨/example⟩

```
```
⟨∗example⟩
```
```
\end{document}
```
⟨/example⟩

## 2.7 End of class

```
```
⟨∗class⟩
```
```
\endinput
```
⟨/class⟩

Change History

v0.0.0

General: First release 1

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