

L<sup>A</sup>T<sub>E</sub>X



# LaTeX Lab 1: Hello World

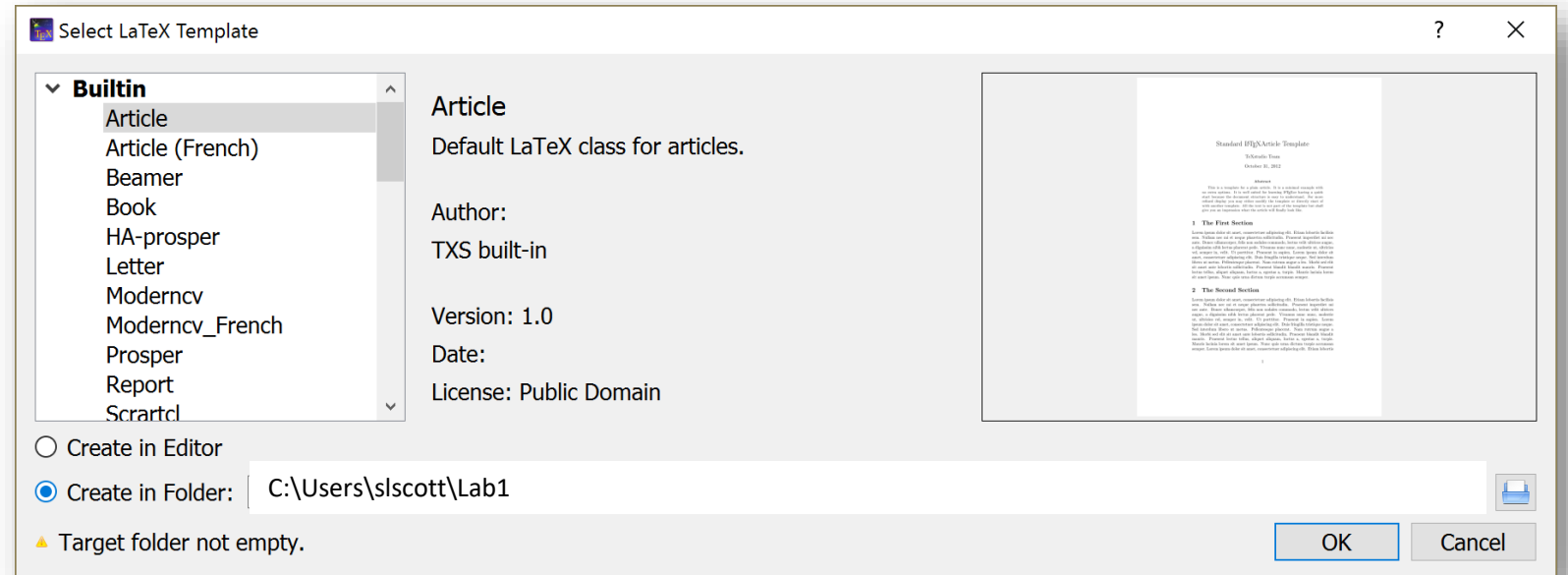
CSI 500

Course material derived from:


Lamport, L. (1994). *L<sup>A</sup>T<sub>E</sub>X: a document preparation system: user's guide and reference manual*. Addison-Wesley

# Hello World

- Let's make our first LaTeX document
- Make a new folder called "Lab1"
- In TexStudio, File, New From Template
- Select "Article"
- Select "Create in Folder", and navigate to your "Lab1" folder.
- Press OK



# Hello World LaTeX code

- Type in the following in the editor window.
  - Your additions are shown in **RED** font color
  - the "%" indicates comments
- Save the document
- Press the green arrowhead titled "Build and View" on the menu bar - it looks like this 
- At the dialog box, press F5 and OK

```
% Hello_world
% example LaTeX document using Article class in TexStudio
%
% your name
% date
% GMU CSI 500
% Spring 2018
%
\documentclass[]{article}

%opening
\title{Hello World}
\author{Your Name Here}

\begin{document}

\maketitle

\begin{abstract}
This is our first LaTeX document.
\end{abstract}

\section{Greetings}
Hello world from \LaTeX !
\end{document}
```

# Build and view

The screenshot displays the TeXstudio interface with the file `C:\Users\slscott\Lab1\template_Article.tex` open. The editor shows the following LaTeX source code:

```
%% Hello_world
%% example LaTeX document using Article class in
TeXStudio
%%
%% your name
%% date
%% GMU CSI 500
%% Spring 2018
%%
\documentclass[11pt]{article}

%opening
\title{Hello World}
\author{Your Name Here}

\begin{document}

\maketitle

\begin{abstract}
This is our
first LaTeX
document.
\end{abstract}
\end{document}
```

The status bar at the bottom of the editor indicates `Line: 16 Column: 0 INSERT`.

The Messages pane at the bottom shows the following output:

```
Process started: "C:/Program Files/MiKTeX 2.9/miktex/bin/x64/pdflatex.exe" -
synctex=1 -interaction=nonstopmode "template_Article".tex

Process exited normally
```

The right pane shows the rendered PDF output, which includes the title page, abstract, and the first section:

Hello World

Your Name Here

January 7, 2018

**Abstract**

This is our first LaTeX document.

**1 Greetings**

Hello world from L<sup>A</sup>T<sub>E</sub>X!

The bottom status bar shows `Page 1 of 1`, `78%` zoom, and the encoding `en_US UTF-8`.

# Let's fix the overly generous margins

- LaTeX "article" class has very wide margins to allow for typesetting in bound journals.
- For regular printing, we can get by with 1 inch (2.54 cm) margins.
- To do so, add in the **`\usepackage{fullpage}`** command in the preamble

```
% Hello_world
% example LaTeX document using Article class in TexStudio
%
% your name
% date
% GMU CSI 500
% Spring 2018
%
\documentclass[11pt]{article}
\usepackage{fullpage}

%opening
\title{Hello World}
\author{Your Name Here}
```

# Build and view

The screenshot displays the TeXstudio interface with the source code of a LaTeX document on the left and the rendered PDF on the right. Red arrows highlight specific features:

- use fullpage package**: An arrow points to the `\usepackage{fullpage}` line in the source code.
- narrower margins**: Two arrows point to the right margin of the PDF document, indicating the effect of the `fullpage` package.

**Source Code (template\_Article.tex):**

```
%% Hello_world
%% example LaTeX document using Article class in
%% TeXstudio
%%
%% your name
%% date
%% GMU CSI 500
%% Spring 2018
%%
\documentclass[11pt]{article}
\usepackage{fullpage}

%opening
\title{Hello World}
\author{Your Name Here}

\begin{document}

\maketitle

\begin{abstract}
This is our
first LaTeX
document.
\end{abstract}
\end{document}
```

**Rendered PDF Content:**

Hello World

Your Name Here

January 7, 2018

Abstract

This is our first LaTeX document.

1 Greetings

Hello world from L<sup>A</sup>T<sub>E</sub>X!

Page 1 of 1 78% en\_US UTF-8 Ready Automatic