# LATEX 101

ME 800 Seminar

Jeremy Roberts

April 15, 2025

Standalone LATEX Documents

### A Barebones Document

```
% example_article.tex
\documentclass{article}
\begin{document}
  Hello, world! This is a
  barebones \LaTeX{} article.
\end{document}
```

Shown above is the plain-text, LaTeX source. At right is the compiled PDF, and below, a zoomed view of the PDF.

Hello, world! This is a barebones LaTeX article.

Hello, world! This is a barebones LaTeX article

# The Preamble and some Lorem Ipsum

```
% example lorem.tex
documentclass{article}
%<<< the preamble <<<<<<<
\usepackage {blindtext}
\title{The Preamble and
      some {\it Lorem Ipsum}}
author { Jeremy Roberts }
date{\today}
\begin{document}
\maketitle
% automatic filler content
\Blinddocument
end{document}
```

The default fonts come from the Computer Modern family invented by the inventor of T<sub>F</sub>X, Donald Knuth.

#### The Preamble and some Lorem Ipsum

Jeremy Roberts April 14, 2025

### 1 Heading on level 1 (section)

Lecun jaum dolor sit aust, consecteure adjacient, edit. Ekian beberta faciliae.

In. Nallam nen in et neupe planetra sollicitadi. Praseut importett sin ize ante. Dose illanetoper, felt non nodelse commodo, betra velit sitrese sanya a dispitasim mila betra placera pele. Virus mon men men, modosi ett, afferiese ante. Dose illanetoper, felt non nodelse commodo, betra velit sitrese sanya ante, consecteure adjacient, gelit. Data franglia tristique neope. Sed interdimitele per attenta. Peletrose pelacetta, dan ratterna sague si co. Model sed elli sit amet ante bloottes sollicitadin. Praseut blanch Raselt mauris. Praseut situation and tristica della materia. Per source si ante finem la menta blootte sollicitadin. Praseut blanch Raselt mauris. Praseut si ante tipone. Nico cui stran dictiona trive accumpate materia.

Lown layen older at annt, connectedors sulpisting all. Elium blootte.

Lown layen color as a contractive sulpisting all. Elium blootte indices ann. Malina out it a topus plantaria on solicituals. Prosessed importate in the east. Done eliumotope, silo inn no solice commonly, eleva with ultrices under the contractive and the c

Lows upon older at anet, consecterer sulpicating (iii. Elium blocker flexibles sen. Mullian our esit expeep blockers soliditability. Proceeding imperilet an ince anto. Donce ulliamorope, delia son modelso commonlo, between ville utiletos and processor soliditation. In the consection of the consection of the complex layer flexible villey soliditation of the consection of the complexity of the complexity of the complexity of the consection of the consection of the consection of the spann docker at most consection of the consection. Densential shaping the spanning of the consection of

3/8

# **Tweaking Formats**

```
% example lorem.tex
documentclass[12pt] {article}
%<<< the preamble <<<<<<<
usepackage(blindtext)
usepackage {times, fullpage}
\title{Tweaking Formats}
author { Jeremy Roberts }
date{\today}
\begin{document}
\maketitle
section{Introduction}
\blindtext[1]
\subsection{Past Work}
\blindtext[2]
end{document}
```

### Tweaking Formats

Jeremy Roberts

April 14, 2025

### 1 Introduction

### 1.1 Past Work

Lorem insum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit, Ut porttitor, Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut. ultricies vel. semper in. velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

### A Journal Article

```
% example journal.tex
\documentclass[3p,twocolumn]{elsarticle}
\usepackage {blindtext, utopia, geometry}
\geometry{letterpaper}
\begin{document}
\title(On Wakefulness of ME800 Students After Lunch)
\author[1]{Jeremv Roberts
  \corref{cor1}\fnref{fn1}}
  \ead{ jaroberts@ksu.com}
\author[2]{Mingjun Wei
 \fnref{fn2}}
 \ead{mjwei@ksu.edu}
\cortext[cor1]{Corresponding author}
\fntext[fn1]{First author footnote.}
\fntext[fn2]{Second author footnote.}
\affiliation[1]
 {organization={Kansas State University}.
 addressline={137D Ward Hall},
 postcode={66506}, city={Manhattan}, state={KS}}
\affiliation[2]
 {organization={...the same place.}}
\begin{abstract}
   \blindtext[1]
\end{abstract}
\maketitle
\section{Introduction}
  \blindtext[2]
\subsection{Past Work}
  \blindtext[3]
\end{document}
```

#### On Wakefulness of MF800 Students After Lunch

Jeremy Roberts<sup>2, L.</sup>, Mingjun Wei<sup>3, 2</sup>

"Karsau State University, 137D Ward Hall, 66506, Manhattan, KS,

Libr same place.

#### Abstract

Lorent journs dobt at anet, consectence adaptiscing ell: Diant hobortis facilità sem. Nullan nee mi et rouge phaetras additudin. Paraester imperient nine cam Done ultanocapte, éllo non soldes common proposition de la common del common de la common del la common del la common del la common de la common d

#### 1. Introduction

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorner felis non sodales commodo, lectus velit ultrices augue. a dignissim nibh lectus placerat pede. Vivamus nunc nunc molestie ut ultricies vel semner in velit. Ut porttitor, Praesent in sapien, Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin Praesent blandit blandit mauris Praes sent lectus tellus, aliquet aliquam, luctus a. egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices auque a dignissim nibh lectus placerat pede. Vivamus

Preprint submitted to Elsevier

nunc musc, molestie ut, ultricies vel, semper in, veiic. Up portiuis: Praesent in sapien. Lorem jpsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed intesdum libero ut metus. Pellentesque placerat. Nam rutrum augue a loo. Motib see elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quisi urna dictum turpis accumsan semper.

#### 1.1 Past Who

Lorem ipsum dolor sit amet, consectetuer adip iscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam

April 14, 2025

<sup>&</sup>quot;Corresponding author
Email addresse: jaroberts@ksu.com(Jeremy Roberts),
njwei@ksu.edu(Mingjun Wei)

1First author feotnote.

# **Thesis Support**

- An official ATEX template is available for K-State theses and dissertations: https://www.k-state.edu/grad/ academics/etdr/template/
- A video tutorial is available: https://youtu.be/XyiD893gpR4
- The template is also available on Overleaf!

Improvements to the discrete generalized multigroup method based on proper orthogonal decomposition and SPH factors

by

Richard Reed

B.S., Kansas State University, 2011
 M.S., Kansas State University, 2015

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree  $\,$ 

DOCTOR OF PHILOSOPHY

Department of Mechanical and Nuclear Engineering Carl R. Ice College of Engineering

> KANSAS STATE UNIVERSITY Manhattan, Kansas

> > 2019

Core LATEX Structures

### **Lists and Enumerations**

```
Unumbered lists of items:
\begin{itemize}
   \item First level item
   \item First level item
   \begin{itemize}
     \item Second level item
     \item Second level item
   \end{itemize}
end(itemize)
Numbered lists:
\begin{enumerate}
    \item Item one
    \item Item two
end{enumerate}
```

### Unumbered lists of items:

- First level item 1
- First level item 2
  - Second level item 1
  - Second level item 2

### Numbered lists:

- 1. Item 1
- 2. Item 2

Like with code, it helps to use white space to improve readability of ETFX.