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# THE BOOK

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

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EDITED BY

JOHN SMITH

*The University Name*

$\mathcal{PL}$

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# Preface

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.  
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# Chapter 1

## The first chapter

### 1.1 The first section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

#### 1.1.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

$$\sin^2 \theta + \cos^2 \theta = 1. \tag{1.1}$$

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as:  $\Rightarrow$

$$a = b + c \tag{1.2}$$

$$= d + e. \tag{1.3}$$

Assuming that the disturbance errors of  $f$  and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

An example of the `\cite` command to cite within the book:

This statement requires citation [1] and [2, 3, 4]

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

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## 1.2 The second section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

### 1.2.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

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**Definition 1.1.** *This is a definition environment.*

**Lemma 1.1.** *This is a lemma environment.*

**Theorem 1.1.** *This is a theorem environment.*

**Proposition 1.1.** *This is a proposition environment.*

**Theorem 1.2** (Mass–energy). *This is a theorem environment.*

*Proof.* This is a proof environment. □



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[illegible]

# Chapter 2

## The second chapter

### 2.1 The first section

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#### 2.1.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as:  $\Rightarrow$

$$\begin{cases} -\frac{d^2u}{dx^2} + \frac{du}{dx} = \pi^2 \sin(\pi x) + \pi \cos(\pi x), & x \in [0, 1], \\ u(0) = 0, & u(1) = 0. \end{cases} \quad (2.1)$$

Assuming that the disturbance errors of  $f$  and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

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## 2.2 The second section

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This is the first appendix



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# Appendix B

## This is the second appendix

### B.1 A sub section

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### B.2 A sub section

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