

# LaTeX Template Customization Guide

Shubham Dutta

2024-11-08

## Table of contents

<b>1</b>	<b>Color Customization</b>	<b>2</b>
<b>2</b>	<b>Title Block Formatting</b>	<b>2</b>
2.1	Title Size . . . . .	2
2.2	Author and Affiliation Spacing . . . . .	3
<b>3</b>	<b>Section Formatting</b>	<b>3</b>
3.1	Section Style . . . . .	3
3.2	Section Spacing . . . . .	3
<b>4</b>	<b>Page Layout</b>	<b>4</b>
4.1	Margins . . . . .	4
<b>5</b>	<b>Headers and Footers</b>	<b>4</b>
5.1	Header Content . . . . .	4
5.2	Header/Footer Lines . . . . .	4
<b>6</b>	<b>List and Paragraph Spacing</b>	<b>5</b>
6.1	List Spacing . . . . .	5
6.2	Paragraph Spacing . . . . .	5
<b>7</b>	<b>Figure and Table Settings</b>	<b>5</b>
7.1	Caption Style . . . . .	5
7.2	Figure Placement . . . . .	6
<b>8</b>	<b>Font Settings</b>	<b>6</b>
8.1	Font Size . . . . .	6
8.2	Font Family . . . . .	6
<b>9</b>	<b>Common Measurement Units</b>	<b>6</b>
	<b>Quick Tips</b>	<b>7</b>

# 1 Color Customization

Colors are defined at the beginning of the template using RGB values:

```
\definecolor{mainblue}{RGB}{0, 75, 150}
\definecolor{sectioncolor}{RGB}{0, 90, 180}
\definecolor{subsectioncolor}{RGB}{70, 70, 70}
```

To change colors:

- Replace RGB values (each number ranges from 0-255)
- First number: Red
- Second number: Green
- Third number: Blue

Example modifications:

```
% For dark blue
\definecolor{mainblue}{RGB}{0, 51, 102}

% For forest green
\definecolor{sectioncolor}{RGB}{34, 139, 34}

% For charcoal gray
\definecolor{subsectioncolor}{RGB}{54, 69, 79}
```

## 2 Title Block Formatting

### 2.1 Title Size

Change the title size by modifying `\LARGE` in:

```
\pretitle{%
  \begin{flushleft}
  \color{mainblue}\LARGE\bfseries
}
```

Available sizes (from smallest to largest):

- `\tiny`
- `\scriptsize`
- `\footnotesize`
- `\small`
- `\normalsize`
- `\large`
- `\Large`
- `\LARGE`
- `\huge`
- `\Huge`

## 2.2 Author and Affiliation Spacing

Adjust spacing after author name using `\[size]`:

```
\author{%  
  \textbf{$author$}\[0.3em]  
  \small{\textcolor{subsectioncolor}{$affiliation$}}  
}
```

- Increase space: `\[0.5em]`
- Decrease space: `\[0.2em]`

## 3 Section Formatting

### 3.1 Section Style

Modify section appearance:

```
\titleformat{\section}  
  {\color{sectioncolor}\normalfont\Large\bfseries}  
  {}{0em}  
  {}  
  [\vspace{0.5em}]
```

- Change font size: Replace `\Large`
- Remove bold: Remove `\bfseries`
- Change color: Replace `\color{sectioncolor}`

### 3.2 Section Spacing

Adjust space around sections:

```
\titlespacing{\section}{0pt}{2em}{1em}
```

Format: `\titlespacing{command}{left}{before}{after}`

- Increase space before: Change `2em` to larger value
- Decrease space after: Change `1em` to smaller value

## 4 Page Layout

### 4.1 Margins

Change page margins:

```
\usepackage[margin=1in]{geometry}
```

Common margin sizes:

- margin=1in
- margin=2.5cm
- margin=25mm

For different margins on each side:

```
\usepackage[left=1in,right=1in,top=1in,bottom=1in]{geometry}
```

## 5 Headers and Footers

### 5.1 Header Content

Modify header content:

```
\fancyhead[L]{\small\textcolor{mainblue}{ELISA Analysis Report}}  
\fancyhead[R]{\small\textcolor{mainblue}{\thepage}}
```

- [L] = Left side
- [R] = Right side
- [C] = Center

### 5.2 Header/Footer Lines

Adjust line thickness:

```
\renewcommand{\headrulewidth}{0.5pt}  
\renewcommand{\footrulewidth}{0.5pt}
```

- Remove lines: Set to 0pt
- Make thicker: Increase value (e.g., 1pt)
- Make thinner: Decrease value (e.g., 0.2pt)

## 6 List and Paragraph Spacing

### 6.1 List Spacing

Adjust spacing in lists:

```
\setlist{itemsep=0.2em, parsep=0.2em}
```

- `itemsep`: Space between items
- `parsep`: Space between paragraphs within items

### 6.2 Paragraph Spacing

Modify paragraph spacing:

```
\setlength{\parskip}{0.5em}
```

```
\setlength{\parindent}{0pt}
```

- `\parskip`: Space between paragraphs
- `\parindent`: Paragraph indentation

## 7 Figure and Table Settings

### 7.1 Caption Style

Customize captions:

```
\captionsetup{
  font=small,
  labelfont=bf,
  justification=justified,
  margin=1cm
}
```

Font options:

- `font=small/large/normalsize`
- `labelfont=bf/normalfont/it`

## 7.2 Figure Placement

Control figure positioning:

```
\renewcommand{\floatpagefraction}{.9}  
\renewcommand{\topfraction}{.9}
```

- Values range from 0 to 1
- Higher values allow more space for figures
- Lower values reserve more space for text

## 8 Font Settings

### 8.1 Font Size

Change document base font size in the document class:

```
\documentclass[11pt]{article}
```

Options:

- 10pt
- 11pt
- 12pt

### 8.2 Font Family

Add different font packages:

```
\usepackage{times} % For Times New Roman  
\usepackage{helvet} % For Helvetica  
\usepackage{courier} % For Courier
```

## 9 Common Measurement Units

- pt: Points (1/72 inch)
- em: Relative to font size
- ex: Relative to ‘x’ height
- in: Inches
- cm: Centimeters
- mm: Millimeters

## Quick Tips

1. Always compile after making changes to check the result
2. Make small changes incrementally
3. Keep a backup of working versions
4. Comment out changes instead of deleting them while testing

### Note

Remember: LaTeX uses two compilations to properly format some elements, so you might need to compile twice to see all changes take effect.