

# Day 01: Intro to L<sup>A</sup>T<sub>E</sub>X



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L<sup>A</sup>T<sub>E</sub>X101

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## Introduction

Course Background

What is L<sup>A</sup>T<sub>E</sub>X?

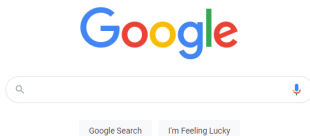
# Introduction

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Course Background

- ▶ **Inspiration** – <https://www.learnlatex.org/>.
- ▶ **Slides Available** – <https://github.com/mdelrosa/latex-101>.
  - ▶ Template based on Clara Pavillet's Oxford Template
- ▶ **Slack back channel**
  - ▶ UC Davis Slack channel

## Markup Language – Instructions for rendering a document.



```
<html itemscope itemtype="http://schema.org/webPage" lang="en">
<head>
</head>
<body jsmodel="TVh0oe" jsaction="YUC7Hei:CLIENT;IVKTFei:CLIENT;HJCe1d:CLIENT;K
JmH:CLIENT;uB70m:CLIENT;xjHTF:CLIENT;J0zyse:CLIENT;E7WMe:CLIENT;jeqfms:
CLIENT;pe3ike:CLIENT;IrNwde:CLIENT;2943H:CLIENT;AD7W0d:CLIENT;YCF3:CLIENT;
ASDQe:CLIENT;1VE3d:CLIENT;VM8gi:CLIENT;Nw93bi:CLIENT;McUWe:CLIENT;NT3od
f:CLIENT;u7JON:CLIENT;PV13jf:CLIENT;uM3TPu:CLIENT;JL9Qdc:CLIENT;KwJaxe:CLI
ENT;gMTEf:CLIENT;vP83bi:CLIENT">
<!-- E0 -->
<style data-mml="1629207776313"></style>
<div class="L8eUp" data-head="1"></div>
<div class="Fevqj"></div>
<textarea class="csi" name="csi" style="display:none"></textarea>
<script nonce="1XuxlC1Scpf0R2BkVNT6Q=="></script>
<script src="/xjs/_/js/k=xjs.s.en_US.BRDYK2ua1Ho.O/ck=xjs.s.IgF8gK1_Sa1.L.W.
O/emQic,V,1ia57b,aa,abd,esync,dvi,fK2ehd,if1,mu,ptGhd,sh_wiz,sf,sonic,spch7xj
s=1" nonce="1XuxlC1Scpf0R2BkVNT6Q==" async"></script>
<div class="gb_Qe" style="visibility: hidden; left: 403px; top: 50px; displa
y: none;"></div>
<div class="gb_Fd">Google apps</div>
<script src="/xjs/_/js/k=xjs.s.en_US.BRDYK2ua1Ho.O/ck=xjs.s.IgF8gK1_Sa1.L.W.
O/emQic,spch/ed=1/dg=2/rs=ACT90ofsh5SXTzuy6zUSI-TVYB0_E-CdaA/mwL1Qz7K3js=
2" nonce="1XuxlC1Scpf0R2BkVNT6Q==" async"></script>
<script src="/xjs/_/js/k=xjs.s.en_US.BRDYK2ua1Ho.O/ck=xjs.s.IgF8gK1_Sa1.L.W.
O/emQic,spch/ed=1/dg=2/rs=ACT90ofsh5SXTzuy6zUSI-TVYB0_E-CdaA/mwL1Qz7K3js=
2" nonce="1XuxlC1Scpf0R2BkVNT6Q==" async gapl_processed="true"></script>
</body>
</html>
```

Figure 1: Example – HTML for websites

L<sup>A</sup>T<sub>E</sub>X– Markup language for academic documents (e.g., publications, presentations, lecture notes, assignments).

```
\begin{frame}{What is \LaTeX?}
\LaTeX -- Markup language for academic documents (e.g., publications, presentations, lecture notes, assignments).
\begin{figure}
\includegraphics[width=0.8\linewidth]{latex_example.png}
\caption{Example -- \LaTeX \; snippet for this slide.}
\label{fig:latex}
\end{figure}
\end{frame}
```

Figure 2: Example – L<sup>A</sup>T<sub>E</sub>X snippet for this slide.

$$V_s = \int_{-R}^R \pi(R^2 - x^2)dx = \frac{4}{3}\pi R^3 \quad (1)$$

```
\begin{equation}
V_s = \int_{-R}^R \pi (R^2 - x^2) dx = \frac{4}{3}\pi R^3 \label{eq:sphere}
\end{equation}
```

Figure 3: Example – L<sup>A</sup>T<sub>E</sub>X snippet for this equation.

Enables rich cross-referencing of equations, figures, tables

- ▶ Equation 1 (previous page)
- ▶ Table 1

Feature	Support
Figures	Yes!
Equations	Yes!
Tables	Yes!
Bibliographies	Yes!

Table 1: A simple table.



Two primary components/steps:

1. Write your L<sup>A</sup>T<sub>E</sub>X file(s) (**Text editor**)
2. “Compile” or “Typeset” your document (**L<sup>A</sup>T<sub>E</sub>X system**)



Figure 4: Text editors (Notepad, Notepad++, Sublime Text) and LaTeX distributions (MikTeX, TeXLive, and TeX Studio)

- ▶ Editors/systems installed on local device (faster)

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- ▶ Editor/systems online (convenient, collaborative)

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- ▶ Will use **Overleaf** for this course.

