

Chem224 - Jeffrey Rinehart - Fall 2023

Week X-Y: Lecture Title

Headings will become table of contents entries in the web page made by mkdocs. The first heading is the title of the page.

Note that HTML tags don't work with pandoc when converting to PDF, but they do work in the notebook and when converting to HTML for the web page. Avoid using them except for the special case of images (see below).

Objectives

1. *Understand objectives*
2. *Learn material*

1 Section Headings

is the largest heading.

1.1 Subsection Headings

makes a subsection heading.

1.1.1 Subsubsection Headings

makes a subsubsection heading.

Subsubsection Headings At ####, text now appears in the paragraph next to the bolded subsubsection heading.

LaTeX

In line LaTeX

- In line LaTeX is surrounded by single dollar signs, e.g. $\frac{1}{2}$.
- Spaces between the dollar signs and the LaTeX, e.g. $\frac{1}{2}$ cause errors in nbconvert and several other tools (though they appear to be ok in the Jupyter notebook itself and pandoc).

Block LaTeX

- Block LaTeX is surrounded by double dollar signs, e.g.
$$\frac{1}{2}$$

$$\frac{1}{2}$$

- This also works for multi-line LaTeX, e.g.

```
$$
| \psi \rangle = \begin{pmatrix}
a_1 \\
a_2 \\
\vdots \\
a_n
\end{pmatrix}
$$
```

becomes

$$|\psi\rangle = \begin{pmatrix} a_1 \\ a_2 \\ \vdots \\ a_n \end{pmatrix}$$

Images

Images require some special handling to work in all situations -- notebook, pdf, and webpage.

Markdown image insertion is done with `![alt text](path/to/image.png)`, but it doesn't allow for resizing of the image, so I don't recommend it.

HTML works for the notebook and webpage but not the pdf conversion. Insert images using HTML and the pdf conversion script will first convert the HTML to LaTeX (LaTeX image insertion doesn't work within the notebook itself, but works with pandoc for pdf conversion).

Images in Different Directories

```
<div align="center">
  
</div>
```

produces

`$\includegraphics[height=200px]{../../images/Capture.PNG}`

The `generate_pdfs.py` script will convert the above to the following LaTeX:

```
$\includegraphics[height=200px]{../../images/Capture.PNG}$
```

Images in the Same Directory

```
<div align="center">
  
</div>
```

produces

`
```

There might be a way to do this manually within the generate\_pdfs.py script.

## Links

Use markdown-style linking and the generate\_pdfs.py script will convert it to LaTeX-style linking for the pdf conversion.

For example, [link text](https://www.google.com) becomes link text.

## Required Software

- A LaTeX distribution -- I'm using TeX Live, but other LaTeX distributions may work as well.
- Pandoc, which is used to convert the notebook to a pdf.