Welcome to the LaTeX workshop
LINN ELISE GULLIKSEN
LEARNING OUTCOME

What are you left with in the end?

- A basic understanding of how LaTeX Works
- Troubleshooting and problemsolving
- A template you can use in your continued work with LaTeX
MAKE YOUR OWN DECISIONS
What is LaTeX?
And when should you use it?

- Typesetting system
- Can be used in stead of e.g. Microsoft Word
- Well suited for large documents that includes mathematical equations and cross referencing
LaTeX

- WYSIWYM ("What You See Is What You Mean")
- Takes some getting used to in the beginning
- You can concentrate on the content of your document, not the layout
- Automatic chapters, table of contents, bibliography, etc.
- Well suited for technical documents, referencing and equations

Microsoft Word

- WYSIWYG (What You See Is What You Get)
- Easy to use, but it can be difficult getting a consistent layout throughout the Whole document
- You have to adjust the different parts of the document
How does LaTeX work?

An introduction

- Edit source file
- Compile source file
- Check result
- .tex
- .pdf
How does LaTeX work?
Save everything in the same folder

- LaTeX searches for your pictures, references, etc. when they are needed
- LaTeX will automatically search in the folder where your .tex file is saved
How does LaTeX work?

Preamble - Document spesification

\begin{document}
\% PREAMBLE
\documentclass[a4paper, oneside, 12pt]{book} % exchange "oneside" with "twoside" if you want a two-sided document (for instance in a Master's thesis)
usepackage{amsmath, graphicx}
\author{Jane Smith} % author
\title{My first document} % title
\% START OF DOCUMENT
\begin{document}
How does \texttt{LaTeX} work?

Commands and environments

If we want something to happen in \texttt{LaTeX} we have to use commands. All commands start with a backslash (\) and have the following structure:

\texttt{\textbackslash command[option]{argument}}

An example is a command used in the preamble:

\texttt{\textbackslash documentclass[a4paper,12pt,twoside]{book}}

Environments have to have a beginning and an end, e.g. \texttt{\begin{document}} and \texttt{\end{document}}
Exercise 1
Chapters, sections and so on

Chapter 1
This is a chapter heading

1.1 Subheading level 1
Insert text here...

1.1.1 Subsubheading level 2
Insert text here...

Subsubheading level 3
Insert text here...

Insert the different levels of chapters, sections and subsections as shown in the example to the left
Exercise 2
Mathematical equations

\[ \text{love} = \lim_{\text{ego} \to 0} \frac{1}{\text{ego}} \]

Write this equation into your document
Exercise 3

Table of contents and lists

Insert table of contents into your document and make a numbered list of your top three favourite candy

Hint: Use \begin{enumerate} to start your list
Exercise 4

Insert picture

Find a picture and insert it into your document. Resize the picture so that it is 50 % of the original size. Choose a fitting caption for your picture and insert it into your document.
Refering to literature in LaTeX
An overview of the process?

Your library of references (.bib)

Your LaTeX-document (.tex)

Both .tex og .bib are ordinary text files
Library of references
What does it look like?

Text file with file extension .bib

Each reference in the reference library must have their own unique key Word

We recommend using a reference management tool (EndNote, Zotero)
Different kinds of references
Cross-references and literature references

Cross-reference
\ref{figure:label}

Literature reference
\cite{key word}
Exercise 5
Cross-references

Insert a cross-reference in the text to the picture you included in the previous exercise.
Exercise 6
Literature references

1. Add a new reference to your reference library

2. Use the new reference in your text and compile the document using the Quick Build function. Check that the new reference is included in the reference list.

3. Use the Citation Compass to make sure that your reference list is correct.
Tips and tricks
LaTeX is your friend!

Focus on the content

Work with LaTeX, not against it

Let the figures float where they want
Troubleshooting
When LaTeX is not your friend

What you **give** is what you get

- spelling errors
- missing `\` or `{
Troubleshooting
When LaTeX is not your friend

LaTeX ignores a line starting with \%

- troubleshooting
- your own comments
Tips and tricks
Interpret error messages

To kinds of error messages (warning, error)

1) What kind?

2) What does the message say?

3) What line?
Exercise 7
Troubleshooting

1) Download the file Exercise 7 under "Exercises" : http://libguides.uis.no/TN/latex

2) Open the file in Texmaker and resolve all error messages
Tips and tricks
When you have tried everything

Comment out all content until you manage to compile the file without errors
Two ways:
1) Put \% front of each line
2) \iffalse "text text text..." \fi
Tips and tricks
When you have tried everything

The very last trick for desperate times
If you have searches trough the document many times, used tricks and still get error messages you do not understand:

Copy the document step by step into a new .tex file. Check continuously that it compiles without error messages.
The road ahead

Trying, failing and Google

ub@uis.no

Try, try, try
Questions about LaTeX?

ub@uis.no

Good luck!