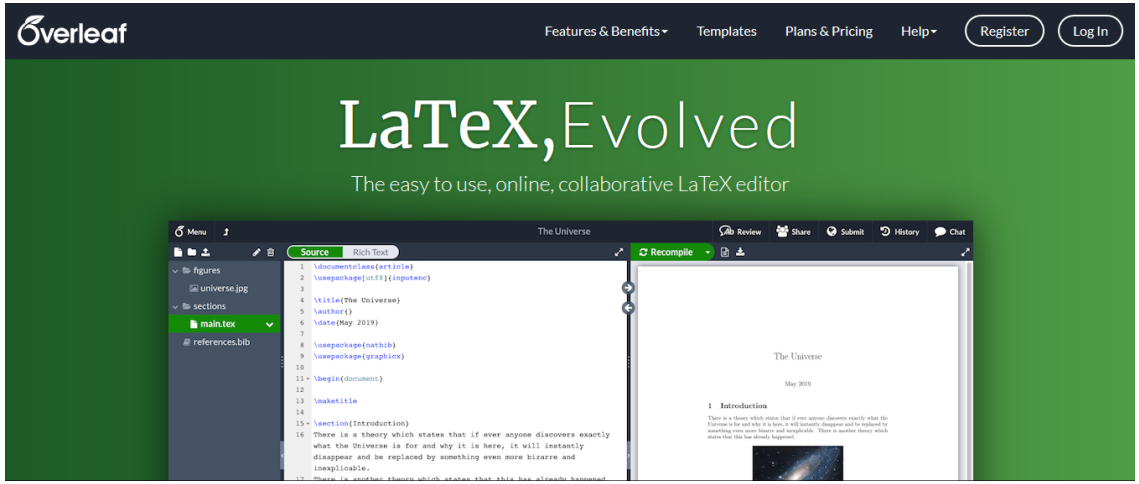
NTK

50°6'14.083"N, 14°23'26.365"E

Národní technická knihovna

National Technical Library

210 mm



Simple Introduction to LaTeX Using Overleaf

Ibrahim.abou.khashabh@teclib.cz

Webinar 18.03.2021

Overleaf

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Agenda

210 mm

1. **Introduction to LaTeX**
2. **Using Overleaf**
3. **Structure of a LaTeX Document**
4. **Some LaTeX Examples**
   - 4.1. How to Make Sections and Subsections?
   - 4.2. How to Leave Comments?
   - 4.3. How to Make Tables?
   - 4.4. How to Include Figures?
   - 4.5. How to Make Lists?
   - 4.6. How to Write Mathematics?
5. **Citations**

Overleaf

NTK
50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Agenda

210 mm

1. Introduction to LaTeX
2. Using Overleaf
3. Structure of a LaTeX Document
4. Some LaTeX Examples
   - 4.1. How to Make Sections and Subsections?
   - 4.2. How to Leave Comments?
   - 4.3. How to Make Tables?
   - 4.4. How to Include Figures?
   - 4.5. How to Make Lists?
   - 4.6. How to Write Mathematics?
5. Citations

Overleaf

WHAT is LaTeX?!

LaTeX is a powerful document preparation system, well-suited for technical documents, in particular those that contain mathematical expressions, tables, figures and references.

WHY LaTeX?!

- Is freely available for all major computer platforms.
- Can produce organized nicely formatted documents.
- Takes care of **automatic numbering** of sections, equations, tables, figures, theorems and references.
- Can be shared among users and across computer platforms with no compatibility problems.

Word vs LaTeX

	MS Word	LaTeX
area		
speed small docs	★★★ The strength of Word is in writing short, relatively simple documents, since you immediately see how what you wrote looks like (WYSIWYG).	★★☆ Writing raw LaTeX is somewhat slower, because you first write the contents only and then you generate an output file with layout in a separate step. LyX is an exception here.
speed big docs w graphics	★☆☆ Word becomes slow when handling either very large texts or texts with large graphics. The sporadic (automatic) saves and type setting processes will force writing breaks while you are waiting for the programme to complete its task.	★★★ Here LaTeX is faster because you write down only the contents and software wastes no time thinking about layout. The separate type setting steps are only done at the end, which saves you time.
ease of use	★★★ Basic Word features are very easy to use and everybody can produce a simple document with reasonable layout. Using advanced features like automatic numbering, links, and citations require a comparable learning time to LaTeX.	★★☆ You will have to initially invest some hours to learn LaTeX without being able to immediately produce text. Depending on how you write LaTeX, you may need to learn some simple commandos, like *\cite{}*, but you will only need a few. Ultimately, you will be faster typing than clicking through Word icons and menus.
layout quality	★★☆ Word type setting quality is ok for most purposes but its far from professional. Plus, you will only be able to reach good quality if you know Word well, which is not the case for the average users. Details	★★★ LaTeX, on the other hand, provides you with professional layout out of the box. If you want to get into the nitty gritty, you can adapt the default to your own taste but the standard is already very high without any customisations.
scientific features	★☆☆ Here the main shortcoming is that Word does not include a citation utility. You will need to purchase additional software to fill the gap. Bibliography programmes come with their own price, learning curve, and disadvantages. Esp. Endnote on the Mac is poor despite being widespread.	★★★ Since LaTeX is open source many generations of scientists have written the extensions they needed. You will be able to find all commonly and most rarely used features. References are handled by BibTeX and a database front end like BiBDesk but unlike in Word integration is seamless and the extensions are free.

Get LaTeX?

https://www.latex-project.org/get/

Overleaf

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Agenda

210 mm

1. Introduction of LaTeX
2. **Using Overleaf**
3. Structure of a LaTeX Document
4. Some LaTeX Examples
   - 4.1. How to Make Sections and Subsections?
   - 4.2. How to Leave Comments?
   - 4.3. How to Make Tables?
   - 4.4. How to Include Figures?
   - 4.5. How to Make Lists?
   - 4.6. How to Write Mathematics?
5. Citations

Overleaf

210 mm

Overleaf?

The easy to use, online, collaborative LaTeX editor

https://www.overleaf.com/

Overleaf

NTK
50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Structure of a LaTeX Document

210 mm

Overleaf

NTK
50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Some LaTeX Examples

210 mm

Overleaf

NTK
50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

210 mm

Overleaf

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

Tips and Tricks

210 mm

Tips and Tricks for Troubleshooting LaTeX

https://www.overleaf.com/learn/latex/Questions/Tips_and_Tricks_for_Troubleshooting_LaTeX

Overleaf

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

210 mm

Questions?

Ibrahim.abou.khashabh@teclib.cz

Webinar 18.03.2021

Overleaf