



Universität
Münster

Example Presentation

Your Name

Outline

Standard Features

- Styles

- Colours

- Titles and Notes

- Lists

- Blocks

Additional Features

- References

- Coloured slides

- Layouts

Closing a presentation

Neatly animated example frames

Standard Features

Standard Features

Styles

Standard Features

Styles

- ▶ The Uni Münster beamer theme comes with **6 built-in styles**:
 - ▶ cyan → “Design C.1 // Flächen // Titel”, default
 - ▶ blue → “Design B // Linie + Fläche // Titel”
 - ▶ grey → “Design D.2 // Fläche + Schloss im Sommer // Titel”
 - ▶ blue-schloss → “Design F.2 // Fläche + Hintergrundbild Schloss im Sommer // Titel”
 - ▶ grey-cyan → “Design G.1 // Linien + Farbhintergrund // Titel” and
 - ▶ green → “Design G.2 // Linien + Farbhintergrund // Titel”
- ▶ A style is chosen at the line to load the beamer theme:
`\usetheme[style=blue-schloss]{UniMS}.`
- ▶ For a very specific look a custom-theme can be created: The custom theme needs to be defined in the beamerthemeUniMS.sty-file, using the highlighted hooks. The colours are defined in beamercolorthemeUniMS.sty, the font styling in beamerfontthemeUniMS.sty.

Standard Features

Styles

- ▶ The **slide dimensions** can be adjusted. They are set as a beamer class option:
`\documentclass[aspectratio=1610]{beamer}`
- ▶ All styles of the Uni Münster theme are optimised for the three common slide dimensions:
 - ▶ 43 → 4:3 (default), 12.80cm x 9.60cm
 - ▶ 169 → 16:9, 16cm x 9cm
 - ▶ 1610 → 16:10, 16cm x 10cm
- ▶ Other ratios are also possible, but might break the layout of the slides. If another ratio is used, it should be setup with a custom style.
- ▶ The **claim** and the style of quotation marks is controlled by the language option of the theme. It can be changed with `\usetheme[language=en]{UniMS}`.
- ▶ The options are `language=en` or `language=de`.

Standard Features

Colours

- ▶ The **colour scheme** depends on the chosen style for the presentation.
- ▶ All colours are defined in the `beamercolorthemeUniMS.sty` file and can be altered there.
- ▶ In general there are 5 colours defined:
 - ▶ `col1`: The primary colour, used among other things for frame titles and the footer, e.g. cyan
 - ▶ `col2`: The secondary colour, used for the subtitle of the frame etc., e.g. peridot.
 - ▶ `col3`: An additional colour, used for further information (like on the title slide), e.g. graphite.
 - ▶ `accent`: The highlighting colour, used for the text highlighting, e.g. cassis.
 - ▶ `textcolor`: The general text colour of the presentation, a dark grey.
- ▶ For small changes within a chosen style either the colour of the style can be changed more general at the colour definition. Or, for more fine-grained changes in specific areas (like frame titles), the chosen colour can be changed at the `setbeamercolor`-statements in the second part of the file.

Standard Features

Titles and Notes

By structuring the presentation in (sub-)sections an agenda can be automatically generated and embedded in the pdf. And it allows to divide the presentation using separator pages (`\makepartpage`, `\makesectionpage`, `\makesubsectionpage`).

The (sub-)section title can then also be used as frame titles either by `\frametitle{\insertsection}`, or by the shorthand command `\frametitles`.

This slide also has notes. To include the notes in the pdf use the beamer option: `\setbeameroption{show notes}`.

Short Title

└ Standard Features

└ Titles and Notes

└ Titles and Notes

Standard Features
Titles and Notes

By structuring the presentation in (sub-)sections an agenda can be automatically generated and embedded in the pdf. And it allows to divide the presentation using separator pages (`\makepartpage`, `\makeexdisspage`, `\makechapterpage`).

The (sub-)section title can then also be used as frame titles either by `\frame{title\inserttitle}`, or by the shorthand command `\frametitle`.

This slide also has notes. To include the notes in the pdf use the beamer option: `\setbeameroption{show notes}`.

- Notes can be suppressed in the output changing the beamer option in the preamble to `\setbeameroption{hide notes}`.
- Use notes to remember what you want to say
- or write down additional information

Standard Features

Animated Lists

If the pdf-output shows animated slides or not, depends on classoption `handout`. To suppress animation (e.g. to print or handout slides) set `\documentclass[handout]{beamer}`.

To create animated slides in the pdf-output, delete the `handout`-option.

1. This is an enumerated list
 2. It has the normal animation, where each item appears per click
 3. With `pause[1]` the item is shown right from the beginning
- ▶ With `alert` the list is animated too –
 - ▶ But all items are visible from the beginning.
 - ▶ With each click, they are just highlighted.
 - ▶ The second level of the `itemize` environment uses the secondary colour, while the first level uses the primary colour.
 - ▶ You can change all colours in `beamercolothemeUniMSep.tex`.

Standard Features

Blocks

Definition 27a

Blocks are a nice way to highlight presentation parts like definitions.

1. The Block environment can be combined with other environments,
2. like numbered lists or bullet points.

This is an example block

This is a different kind of block, explaining an interesting topic.

Alert Block

This block highlights something very important.

Additional Features

Additional Features

References

Additionally to the built-in beamer features, there is more to this theme:

Maybe you would like to reference what someone said on a slide, or present an infographic and would like to reference the authors. You can do that with “`\source{}`”. Which positions the reference in light grey at the bottom left of the slide.

It is important to place this command outside of fancy environments like columns, to really push it to the bottom of the frame (and not only the bottom of the environment). This command does not automatically create a reference list (but could be combined with `\cite{}`). The command also leads to aligning the content of the slide at the top. To counterbalance this use `\vskip0pt plus 1filll` before the content.

Additional Features

Coloured slides

This is a coloured slide, if you want to have some fun.

Additional Features

Two Column Layout

- ▶ On the left
- ▶ there are just
- ▶ a lot of bullet points.

Block

While, at the same time, on the right, there can be an informative block or a picture.

Sidenote: This command uses the columns-environment.

Additional Features

Layout with Motivating Icon on the Right

- ▶ There is a very long text here with many good points. Next to it is a nice icon, which is very motivating. The text will cover several lines, if it gets too long.
- ▶ Good icons can be found here:
 - ▶ [The Noun Project](#)
 - ▶ [Ikonate](#)
 - ▶ Colour definitions (hex-values) can be found in `beamercolorthemeUniMS.sty`



Closing a presentation

Thank you for your attention!

Questions?

Contact

Your Name

optionally additional information, like
M.Sc. Computer Science
University of Münster

Emailaddress@uni-muenster.de



Find me on PhilPeople!

Contact

Your Name

optionally additional information, like
M.Sc. Computer Science
University of Münster

Emailaddress@uni-muenster.de



[Find me on PhilPeople!](#)

Contact

Your Name

optionally additional information, like
M.Sc. Computer Science
University of Münster

Emailaddress@uni-muenster.de



Find me on PhilPeople!

Neatly animated example frames

Neatly animated example frames

Conspiracy Theory: Amikäfer

- ▶ 1950: sprunghafter Anstieg von Kartoffelkäfern in DDR
- ▶ zu früh im Jahr, zu viele, oft vermehrt nach Fluggeräuschen
- ▶ Kartoffelkäfer von allen Seite als mögliche Waffe erforscht
- ▶ DDR-Regierung: wurden von US-Soldaten abgeworfen, um DDR zu destabilisieren
- ▶ Aber: keine Unterlagen auf Seiten der Alliierten
- ▶ Kaum Möglichkeiten der Bekämpfung (Kartoffelkäferabwehrdienst, Pflanzenschutzmittel) + geeignetes Wetter für Käferwachstum

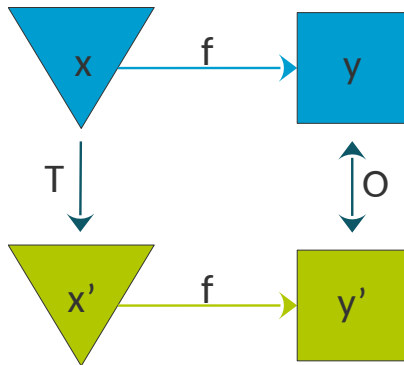


Ist das eine Verschwörungstheorie?

Neatly animated example frames

Metamorphic Relations

- ▶ MR = formulation of expected behaviour
- ▶ Describe connection between **source testcase** and **follow-up testcase**
- ▶ 3-tuple:
 - T** - relation between inputs (transformation)
 - O** - relation between outputs
 - f** - program function



Neatly animated example frames

Most Relevant References: Metamorphic Testing

- [Bar+15] Earl T. Barr et al. “The Oracle Problem in Software Testing: A Survey”. In: IEEE Transactions on Software Engineering 41.5 (2015), pp. 507–525. DOI: [10.1109/TSE.2014.2372785](https://doi.org/10.1109/TSE.2014.2372785).
- [CCY98] T. Y. Chen, S. C. Cheung, and S. M. Yiu. “Metamorphic Testing: A New Approach for Generating Next Test Cases”. Technical Report HKUST-CS98-01. The Hong Kong University of Science and Technology, 1998.
- [Che+18] Tsong Yueh Chen et al. “Metamorphic Testing: A Review of Challenges and Opportunities”. In: ACM Computing Surveys 51.1 (2018), 4:1–4:27. DOI: [10.1145/3143561](https://doi.org/10.1145/3143561).
- [Liu+14] Huai Liu et al. “How Effectively Does Metamorphic Testing Alleviate the Oracle Problem?” In: IEEE Transactions on Software Engineering 40.1 (2014), pp. 4–22. DOI: [10.1109/TSE.2013.46](https://doi.org/10.1109/TSE.2013.46).
- [Seg+16] Sergio Segura et al. “A Survey on Metamorphic Testing”. In: IEEE Transactions on Software Engineering 42.9 (2016), pp. 805–824. DOI: [10.1109/TSE.2016.2532875](https://doi.org/10.1109/TSE.2016.2532875).
- [Seg+20] Sergio Segura et al. “Metamorphic Testing: Testing the Untestable”. In: IEEE Software 37.3 (2020), pp. 46–53. DOI: [10.1109/MS.2018.2875968](https://doi.org/10.1109/MS.2018.2875968).
- [Wey98] Elaine J. Weyuker. “On Testing Non-Testable Programs”. In: The Computer Journal 25.4 (1982), pp. 465–470. DOI: [10.1093/comjnl/25.4.465](https://doi.org/10.1093/comjnl/25.4.465).
- [Zho+20] Zhi Quan Zhou et al. “Metamorphic Relations for Enhancing System Understanding and Use”. In: IEEE Transactions on Software Engineering 46.10 (2020), pp. 1120–1154. DOI: [10.1109/TSE.2018.2876433](https://doi.org/10.1109/TSE.2018.2876433).