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UGM Beamer Template Guidelines

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Basic Text Formatting

- ▶ Normal text with **bold**, *italic*, and colored text
 - ▶ Bullet points with standard indentation
 - ▶ **Highlighted text** for emphasis
1. Numbered lists are created with enumerate
 2. Second item in the list
 3. Third item with **formatting**



Basic Text Formatting

Standard Block

This is a standard block environment for highlighting content.

Alert Block

This block is used for warnings or important notes.

Example Block

This block is used for examples.



Basic Math Formatting

Inline math: $E = mc^2$ is Einstein's famous equation.

Display math:

$$\nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t}$$

Equation with numbering:

$$\nabla \times \vec{B} = \mu_0 \vec{J} + \mu_0 \varepsilon_0 \frac{\partial \vec{E}}{\partial t} \quad (1)$$

Align environment for multiple equations:

$$E = mc^2 \quad (2)$$

$$m = \frac{E}{c^2} \quad (3)$$

Two-Column Layout with Beamer Columns

Left Column

- ▶ First bullet point
- ▶ Second bullet point
- ▶ Third bullet point with longer text
that may wrap to the next line

Some regular text in the left column.

Right Column

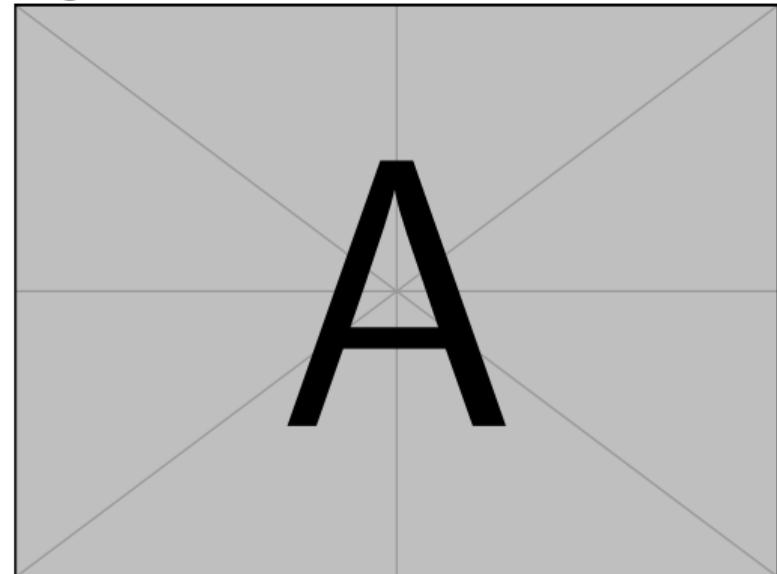


Image Caption

Three-Column Layout

Column 1

- ▶ Item 1
- ▶ Item 2

Column 2

- ▶ Item A
- ▶ Item B

Column 3

- ▶ Item X
- ▶ Item Y



Uneven Column Layout

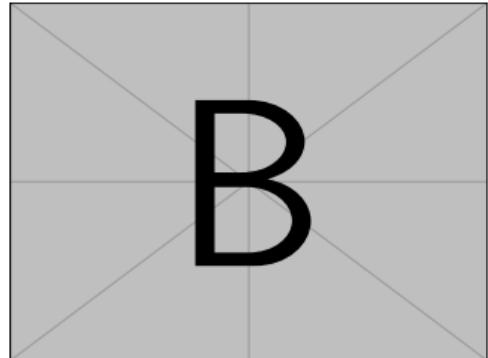
Wider Column

This column contains more content and takes up 65% of the slide width.

- ▶ The width can be adjusted as needed
- ▶ The layout is flexible
- ▶ Content will flow within the specified width

Narrower Column

This column is only 30% wide.



Basic Table

Left	Center	Right
Data 1	123	45.67
Data 2	456	89.01
Data 3	789	23.45

Table: Basic table with borders

Table Usage Tip

Use the | character to create vertical lines and \hline for horizontal lines.



Professional Table with Booktabs

Method	Accuracy (%)	Time (s)
Method A	95.2	1.23
Method B	97.8	2.56
Method C	98.1	4.78

Table: Professional table with booktabs package

Booktabs Tip

Use \toprule, \midrule, and \bottomrule for professional tables.



Colored Table

Category	Value	Percentage
Category A	45.2	22%
Category B	32.1	16%
Category C	78.9	39%
Category D	47.3	23%

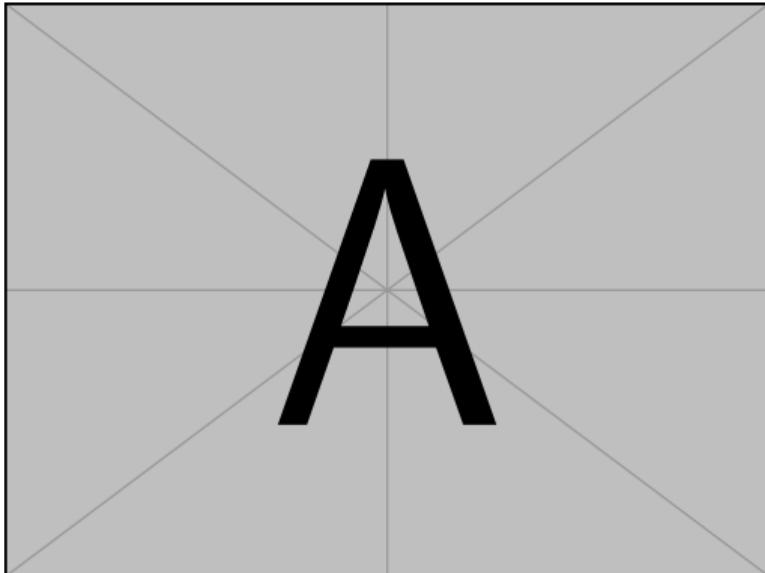
Table: Table with alternating row colors

Color Tip

Use `\rowcolors{2}{color1}{color2}` to alternate row colors starting from row 2.



Basic Image Inclusion



Full-width image with caption

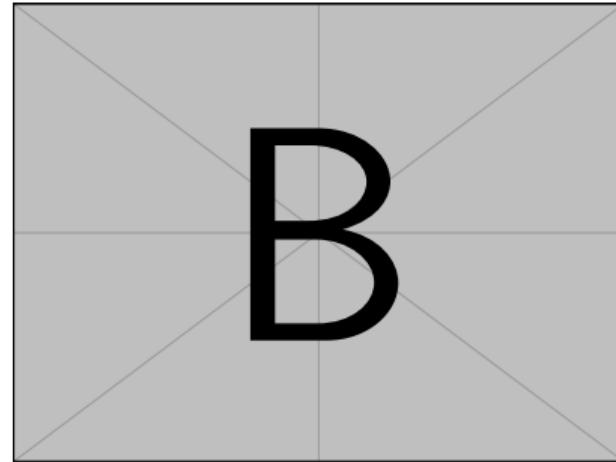


Figure: Image using figure environment

Basic Image Inclusion

Image Tip

Use `width=\textwidth` to make the image fill the column width.

- ▶ Use `figure` environment for formal figures
- ▶ Use `centerline` for simple captions
- ▶ Control size with `width` parameter

Image Grid Layout



Image A



Image B



Image C



Image D

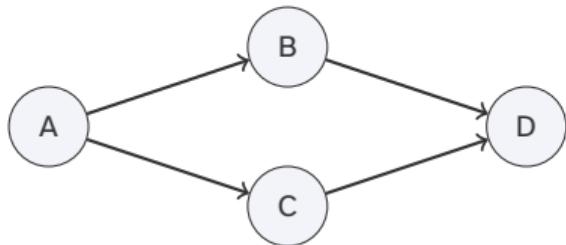
Grid Tip

Use a tabular environment to create a grid of images with captions.

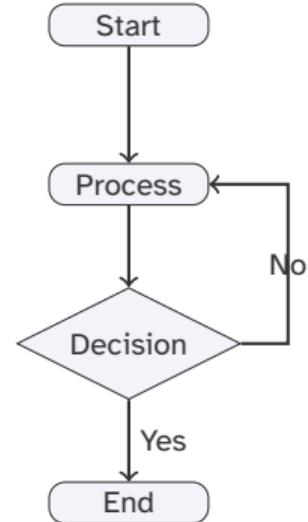
Including Videos



TikZ Diagrams

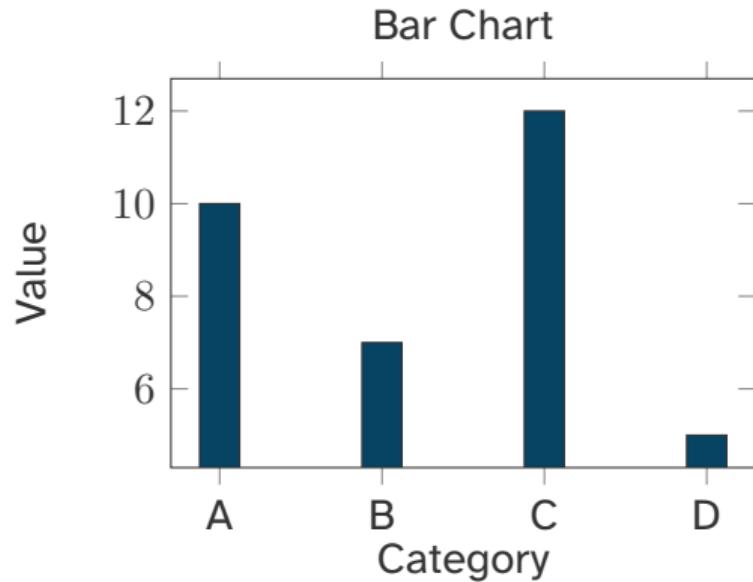
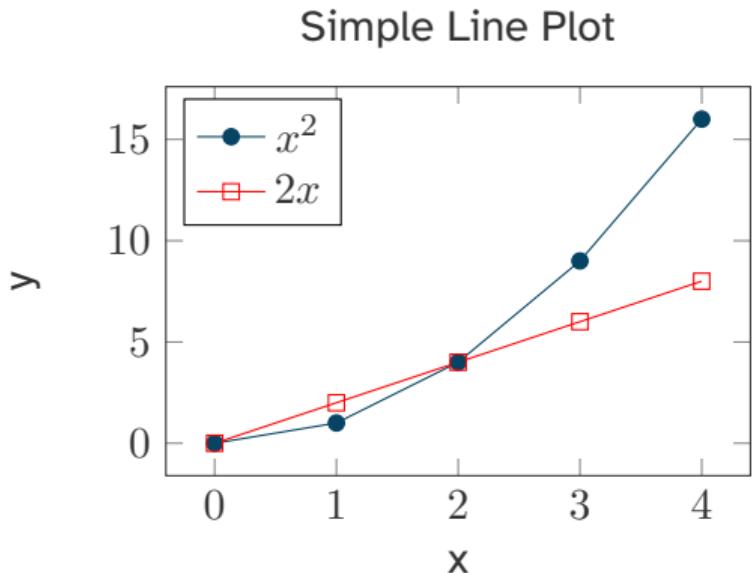


Simple network diagram



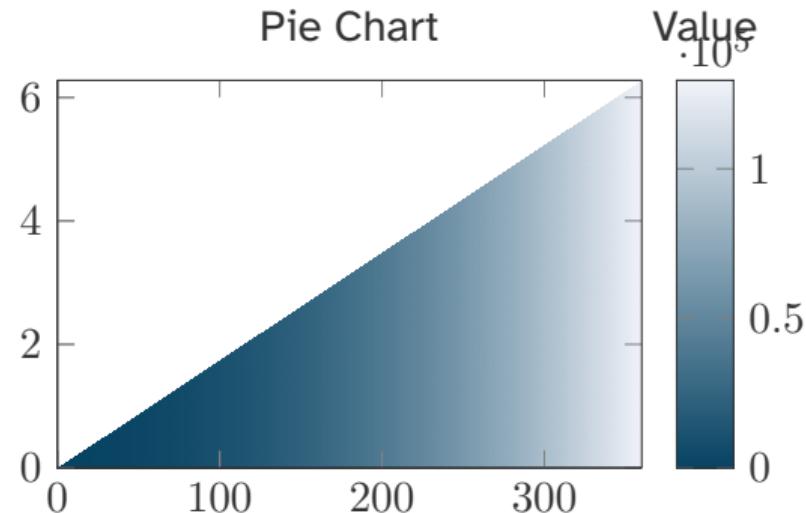
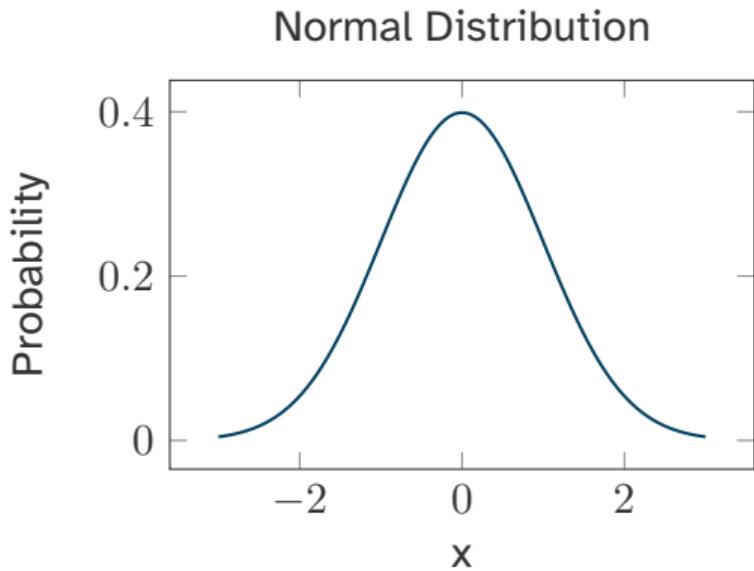
Simple flowchart

Graphs with PGFPlots



Use the pgfplots package for creating professional charts and graphs.

More Chart Examples



Basic Code Listing

```
1 #include <iostream>
2
3 int main() {
4     // This is a comment
5     std::cout << "Hello, World!" << std::endl;
6     return 0;
7 }
8
```

Listing 1: Hello World Example

Listing Tip

- ▶ Specify the language for syntax highlighting
- ▶ Use the listings and [fragile] for frames with listings



Code Listing with Line Numbers and Highlighting

```
1 def calculate_factorial(n):
2     """
3         Calculate the factorial of a number using recursion.
4     """
5     if n <= 1:
6         return 1 # Base case
7     else:
8         return n * calculate_factorial(n-1) # Recursive case
9
10 # Test the function
11 for i in range(5):
12     print(f"Factorial of {i} is {calculate_factorial(i)}")
13
```

Listing 2: Python Example

Inline Code and Algorithms

Inline code: `int x = 42;`

```
1 SELECT
2     students.name,
3     AVG(grades.score) as avg_score
4 FROM students
5 JOIN grades ON students.id = grades
6 .student_id
7 GROUP BY students.id
8 HAVING avg_score > 80
9 ORDER BY avg_score DESC;
```

Listing 3: SQL Query

Input: Array A of size n

Output: Sorted array A

for $i \leftarrow 1$ **to** $n - 1$ **do**

$key \leftarrow A[i];$

$j \leftarrow i - 1;$

while $j \geq 0$ **and** $A[j] > key$ **do**

$A[j + 1] \leftarrow A[j];$

$j \leftarrow j - 1;$

end

$A[j + 1] \leftarrow key;$

end

Algorithm 1: Insertion Sort

TColor Boxes

Standard Box

This is a standard colored box with a title.

- ▶ You can include lists
- ▶ And other content inside

Warning Box

This box uses different colors to indicate warnings or critical information.

Box with Shadow

This box has a drop shadow effect.



Custom TColor Boxes

Note Box

Important note with an icon in the title.

Tip Box

Useful tip with a light bulb icon in the title.

Question Box

Question or quiz with a question icon in the title.



Manual Bibliography

- ❑ Author, A. (2023). *Title of the paper*. Journal Name, 10(2), 123-145.
- ❑ Author, B., & Author, C. (2022). *Title of the book*. Publisher Name.

