



Introduction

The **WLU Conference Poster Theme** is a modern theme based on `beamerposter` that uses the official [WLU branding](https://www.wlu.ca/about/our-brand/)^a. Some of its elements and styling are inspired by [Gemini](https://github.com/anishathalye/gemini/) theme^b.

It comes with a few nifty features:

- Use of the official color scheme for WLU throughout.
- Customized block environments.
- Easy to extend and modify separate parts (header, fonts, etc).

Separate parts are available as e.g. `\usecolortheme{wluposter}`!

To use it in you documents add something like the following

```
\documentclass[final]{beamer}
% 1. The theme supports different sizes, e.g. a0, a1, ...
% 2. It can also be viewed in "landscape" or "portrait" mode
\usetheme[size=a1,orientation=landscape]{wluposter}

% 3. You can select other color schemes or box types
\usecolortheme{wluposter}
```

More information is available in `template.tex`.

^a<https://www.wlu.ca/about/our-brand/>
^b<https://github.com/anishathalye/gemini/>

Colors and Fonts

This theme uses the *Myriad Pro* font. This is a clean *sans serif* font from Adobe that is recommended by the official WLU branding.

The theme has three standard colors:

- A nice **light blue** (`WLULightBlue`).
- A bolder **dark blue** (`WLUDarkBlue`).
- An attention grabbing **yellow** (`WLUYellow`)!
- Variants `color!x` can also be used to darken or lighten them

These can be used for emphasizing **text** or for more obvious **alerts**. Standard **bold** and *italic* emphasis can of course also be used!

Lists, enumerations, and descriptions

Lists

- Itemize lists are nicely customized ...
 - All the way down ...
 - To the third level!

Enumerate

1. We can also enumerate!
2. Many things!
3. It's great!

Description

- WLU** And describe our university in exquisite detail, so that we can capture all its multiline greatness!

Blocks

We have various standard Beamer blocks styled in a pleasing fashion. You might have noticed their use for each of the "sections" up to now.

Block 1

Some block block: `\begin{block} ... \end{block}`.

Alert 1

Some alert block: `\begin{alertblock} ... \end{alertblock}`.

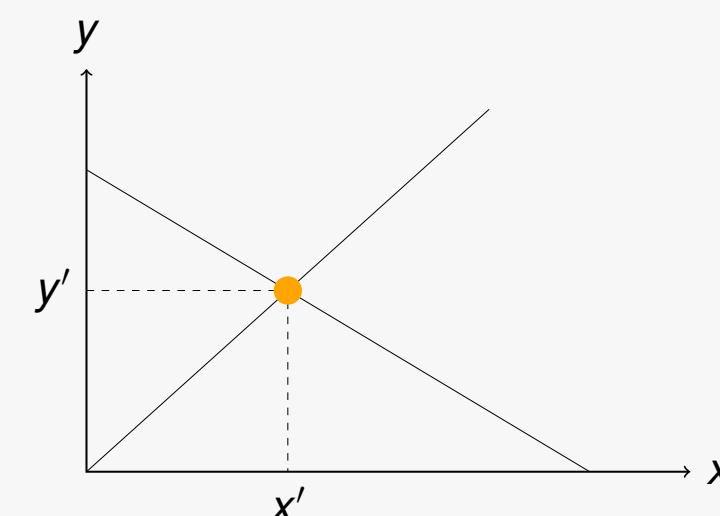
Example 1

Some example block: `\begin{exampleblock} ... \end{exampleblock}`.

You probably should not nest these as we just did here!

Figures

You can also add figures to each block.



A simple figure.

These should be used quite extensively to better make your point. This is a visual sort of medium after all!

Tables

Largest cities in the world (source: UN 2018 population estimates from Wikipedia)

City	Population
Tokyo	37,468,000
Delhi	28,514,000
Shanghai	25,582,000
São Paulo	21,650,000

Tables are also a good way to display data. Using the `booktabs` package should make your tables look very nice indeed!

Example: Infinite Primes

Imagine that there were only a limited number of prime numbers, and we could list them as p_1, p_2, \dots, p_n . Now, consider the number formed by multiplying all these primes together and then adding one, that is,

$$N = p_1 \times p_2 \times \dots \times p_n + 1.$$

If you try to divide this new number N by any of the primes on your list, you always get a remainder of 1. This means that none of the primes p_1, p_2, \dots, p_n can be a divisor of N . Since every number greater than 1 must have a prime factor, N must either be a prime itself or be divisible by a prime that was not in our original list.

This simple observation shows that no matter how many primes you start with, you can always construct a number that reveals at least one additional prime, proving that there are infinitely many prime numbers.

Example: Grönwall Inequality

Suppose you have a nonnegative function $u(t)$ that satisfies an inequality of the form

$$u(t) \leq a + \int_{t_0}^t b(s) u(s) \, ds,$$

where $a \geq 0$ is a constant and $b(t) \geq 0$ is a given function. The idea behind the inequality is that even though $u(t)$ might depend on its past values through the integral, its growth is controlled by the accumulation of the function $b(t)$.

To see how this control works, define an auxiliary function

$$v(t) = a + \int_{t_0}^t b(s) u(s) \, ds.$$

Since $u(t) \leq v(t)$, differentiate $v(t)$ with respect to t to obtain

$$v'(t) = b(t) u(t) \leq b(t) v(t).$$

Dividing both sides by $v(t)$ (which is positive) gives

$$\frac{v'(t)}{v(t)} \leq b(t).$$

Integrating this inequality from t_0 to t and exponentiating yields

$$v(t) \leq v(t_0) \exp\left(\int_{t_0}^t b(s) \, ds\right).$$

Since $v(t_0) = a$ and $u(t) \leq v(t)$, we conclude that

$$u(t) \leq a \exp\left(\int_{t_0}^t b(s) \, ds\right).$$

This simple argument shows that if the function $u(t)$ satisfies the original integral inequality, then its value at any time t is bounded above by an exponential function determined by the integral of $b(t)$; this is precisely the statement of the integral Grönwall inequality.

References

- [1] W. Diffie and M. Hellman.
New directions in cryptography.
IEEE Transactions on Information Theory, 22:644–654, 1976.
- [2] D. Jackson.
Bernstein's theorem and trigonometric approximation.
Transactions of the American Mathematical Society, 40:225–225, 1936.