The Total Carbon Footprint (CO_2 emission in the last 12 months, in metric tons) 2025

CO_2 (cars) - for scope 1

$$= \frac{number\ of\ cars\ entering\ your\ university \times 2 \times approximate\ travel\ distance\ of\ vehicle\ each\ day\ inside\ campus\ only\ (KM) \times 240}{100} \times 0,02$$

$$= \frac{445 \times 2 \times 2,2 \times 181}{100} \times 0,02$$

$$= 70,87 \text{ metric tons}$$

Notes:

181 is the number of working days per year

0.02 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km car

CO_2 (motorcycle) – for scope 1

$$= \frac{number\ of\ motorcycle\ entering\ your\ university \times 2 \times approximate\ travel\ distance\ of\ vehicle\ each\ day\ inside\ campus\ only\ (KM) \times 240}{100} \times 0,0$$

$$= \frac{6.495 \times 2 \times 2,2 \times 181}{100} \times 0,01$$

$$= 517,26 \text{ metric tons}$$

Notes:

181 is the number of working days per year

0.02 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km motorcycle

CO_2 (bus) – for scope 3

$$= \frac{number\ of\ shuttle\ bus\ in\ your\ university \times total\ trips\ for\ shuttle\ bus\ service\ each\ day \times approximate\ travel\ distance\ of\ vehicle\ each\ day\ insid}{100}$$

$$= \frac{2 \times 72 \times 2,2 \times 181}{100} \times 0,01$$

$$= 5,65 \text{ metric tons}$$

Notes:

There are two UNS campus buses. Buses operate from 07.00–16.00 (9 hours). Each bus operates around UNS for ± 15 minutes from Monday and Friday, meaning that in 1 hour, one bus can make 4 trips. So the total number of bus trips per day is 4 x 9 = 36 times per bus. If UNS had two, the total number of daily bus trips would be 72.

0.01 = is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km for bus

181 is the number of working days per year

CO_2 (electricity) - for scope 2

$$= \frac{electricity\ usage\ per\ year\ (kWh)}{1000} \times 0,84$$

$$= \frac{4.956.208\ kWh}{1000} \times 0,84$$

$$= 4.163,215 \text{ metric tons}$$

CO_2 (electricity) - for scope 3

$$= \frac{electricity\ usage\ per\ year\ (kWh)}{1000} \times 0,84$$

$$= \frac{1.033.555,87\ kWh}{1000} \times 0,84$$

$$= 868,18 \text{ metric tons}$$

Notes:

0.84 = is the coefficient to convert kWh to metric tons (source: www.carbonfootprint.com)

CO_2 (total scope 1+2)
$= 517{,}26 + 70{,}87 + 4.163{,}215$
$= 4751{,}35$ metric tons
CO_2 (total scope 3)
$= 868{,}18 + 5{,}65$
$= 873{,}83$ metric tons

Carbon footprint in 2025 = $5.627{,}14$ metric tons

Description:

The total carbon emissions for 2025 amounted to 5.627,14 metric tons. Compared to the total carbon emissions in 2024, which were 5.849,517 metric tons, the total carbon emissions have decrease.

The decrease in total carbon emissions was due to a decrease in CO2 emissions from number of working days per year from 240 to 181 decreased compared to last year.