



Carbon Footprint (CO₂ emission in the last 12 months, in metric tons) for PUA for the academic year (2024-2025)

CO₂ (electricity)

$$\begin{aligned} &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,545 \\ &= \frac{11,275,670 \text{ kWh}}{1000} \times 0,545 \\ &= 6145.24015 \text{ metric tons} \end{aligned}$$

CO₂ (bus)

$$\begin{aligned} &= \frac{\text{number of shuttle bus in your university} \times \text{total trips for shuttle bus service each day} \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 270}{100} \times 0,01 \\ &= \frac{0 \times 0 \times 5 \times 270}{100} \times 0,01 \\ &= 0 \text{ metric tons} \end{aligned}$$

CO₂ (cars)

$$\begin{aligned} &= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 270}{100} \times 0,02 \\ &= \frac{2600 \times 2 \times 2 \times 270}{100} \times 0,02 \\ &= 561.6 \text{ metric tons} \end{aligned}$$

CO₂ (motorcycle)

$$\begin{aligned} &= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 270}{100} \times 0,01 \\ &= \frac{60 \times 2 \times 2 \times 270}{100} \times 0,01 \\ &= 6.48 \text{ metric tons} \end{aligned}$$

CO₂ (total)

$$\begin{aligned} &= 6145.24015 + 0 + 561.6 + 6.48 \\ &= 6429.28015 \text{ metric tons} \end{aligned}$$

Carbon footprint 2024/2025 = 6713.32 metric tons

PUA Total Carbon Footprint (UI GreenMetric)



No	Category	Total Capacity	Daily Entry
1	PUA Staff Vehicles	600	300
2	Visitor Vehicles	500	250
3	Student Vehicles	1500	750
4	Motorcycles	60	30
5	Bicycles	8	4
Total		2668	1334

CO2 Electricity	
Electricity usage per year (KWh)	11,275,670
CO2 Electricity in metric tons	6145.24015
CO2 Bus	
number of shuttle bus in your university	0
CO2 Bus in metric tons	0
CO2 Cars	
number of cars entering your university	2600
total trips for cars each day	2
approximate travel distance of vehicle each day inside campus only (KM)	2
CO2 Cars in metric tons	561.6
CO2 Motorcycle	
number of motorcycles entering your university	60
total trips for motorcycle each day	2
approximate travel distance of vehicle each day inside campus only (KM)	2
CO2 Motorcycle in metric tons	6.48
CO2 Total	
CO2 Total in metric tons	6713.32

Our parking management policy has successfully optimized campus traffic, maintaining a 50% $[(1334/2668) \times 100]$ utilization rate and effectively encouraging carpooling among students and staff. These figures serve as a baseline for our ongoing efforts to reduce campus-related emissions and promote sustainable transportation alternatives.