Sustainable Improvement of the University Premises: **Ecological** Asphalt at the **UTN FRP Parking** Lot.

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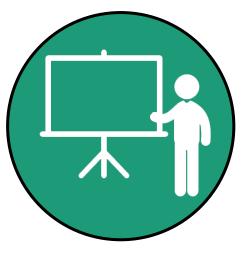
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# Introduction

- Parking conditions and possible solution.
- o Environmentally friendly and sustainable solution.



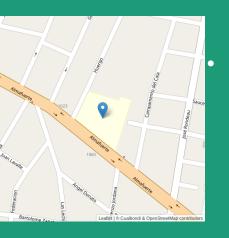
# Map of the presentation

- 1. Show the area that is the focus of this work.
- Describe the context and mention the causes of the problem.
- 3. Describe the consequences of the problem.
- 4. Present a possible solution to the problem.
- 5. Describe the solution process with its positive and negative aspects.

## **Problem Definition and Analysis**

• Paraná city, province of Entre Ríos.





National Technological University
Parana Regional School of Engineering.

• Graph of the area and the height above sea level.



## What is the problem ?

- The parking is made of soil with stones and is not covered.
- It is closed on rainy days
- Students and workers are not allowed to use it on those days







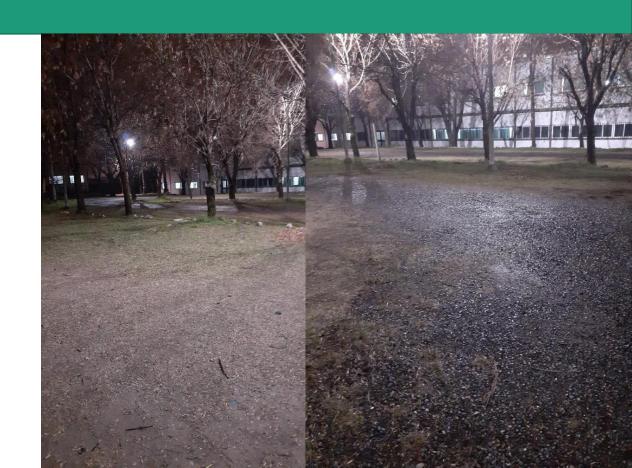
## Pictures of the problematic situation



### Causes:

1. The parking lot is not adequately maintained.

2. The parking lot does not have a roof



### Consequences:



- Vehicles should be left outside the parking lot.
- The surrounding streets are full of parked cars and it is very difficult to find a free spot.
- Cars don't have the same protection.





## Solution approach

### Positive aspects

- √ Flexibility
- ✓ High resistance to climate factors
- ✓ Increased durability
- ✓ Easy cleaning
- ✓ A non-slip surface

#### Negative aspects

- High cost
- Poor compactness
- Low water resistance
- Poor mix composition





EPDM (ethylene propylene diene rubber)





## Conclusion

- Reducing water potholes
- Facilitating the care of the parking lot
- Parking inside the premises
- Helping the environment.

## Thanks!

