



# Aerodynamics

## Design & production of the nose

## Green innovation meets performance

### Our Project

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Formula Electric Belgium is a team of engineering students who build a **Formula-Student racecar** to compete in international competitions. We design and build a brand-new car every year and compete with other teams in multiple worldwide competitions during the summer months. Formula Student is by far the biggest **engineering competition** in the world and continues to grow. From next year on, we will be competing in both the **electrical** and **driverless** competition. You can join the project as a volunteer. This allows you to contribute to the next race car whilst keeping a flexible schedule.

### Tasks

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**Aerodynamics** is an important part of the **performance** in a race car. Numerous simulations are made in order to improve our aerodynamic package each year. The focus is made on downforce production and drag reduction.

The nose of the car is an important part in the aerodynamic package. Since it hits the air first it will mainly impact the flow downwards. It works in combination with the front wing to provide flow to the undertray.

The volunteer will have the task of designing this nose with the help of a CFD software provided to him. He/she will also design the mold in the best material possible (MDF, foam,...). Finally, he/she will produce it with the help of the aerodynamics department.

### Profile

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- Basic knowledge about CFD and CAD
- Knowledge about incompressible flows
- Problem solving skills (creativity)
- Team player with a goal to learn

### Returns

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- A unique engineering experience
- Contact with companies at the leading edge of technology
- Applying your engineering skills in the real world
- Developing your hard- and soft-skills in a company-like environment
- Work in a team with young motivated engineers

### Up for the challenge?

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Want to perform a similar case-study within our team? Submit your **resume** and **motivation letter** (one page) to [volunteers@formulaelectric.be](mailto:volunteers@formulaelectric.be)