



# Powertrain Motors and Drives

## 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. Since the 2024 season, FEB works on a combined manual (with driver) and **driverless** car. You can join the project during one or two years by applying for the '**Postgraduate Tech Innovations in Ventures and Teams**'.

### Tasks

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As a Powertrain Engineer, you will be responsible for the design and manufacturing of the drivetrain components that convert electrical energy into mechanical energy at the wheels.

Within the department, you will be responsible for research on the **development of the drives** that convert the DC power of the battery into 3-phase currents and deliver it to the four in-wheel motors. Next to optimizing the existing solution, you will help realize a new, in-house designed package that adds controllability and dramatically reduces the car's weight.

Alongside the development of the inverters, you will be responsible for the mechanical **design of our in-wheel motors**. Taking into account the various loads of the application, you must come up with a thermal-effective solution that can be packaged in a compact space.

### Up for the challenge?

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Submit your **resume** and **motivation letter** (one page) to  
[recruitment@formulaelectric.be](mailto:recruitment@formulaelectric.be)

### Profile

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- Bachelor/Master Engineering Science, Engineering Technology or Business Engineering
- Knowledge about electrical motor design and the development of advanced drive systems
- Experience with Matlab, Simulink and PID systems
- Interest in CAD design/FEM-software

### Returns

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- A unique engineering experience
- Developing your hard- and soft-skills in a company-like environment
- Work with the newest technologies and innovative companies
- Work in a team with a network of well over 120 partners
- A summer season packed with competitions all over Europe
- An experience of a life-time!