

BATTERY AND COOLING POWERTRAIN

Green Innovation meets performance

Our Project

Formula Electric Belgium is a student-based race team that pushes green innovation to performance. We design and build our own electric race car each year to participate in the international Formula Student competitions. This year, we are looking for pioneers to challenge the status quo and bring our top-notch electric race car to the next level. As a postgraduate student, you will research, design, test your systems together with a group of highly motivated, ambitious students. You will work together with your team members and numerous companies to develop new innovations.

Function

In this role, you will have the opportunity to work on the design and configuration of the **battery system**. This includes selecting and arranging cells in the most efficient manner to minimize the overall size of the battery. The cells will be welded together using laser technology. Additionally, you will be responsible for the design of the modules in which the cells are placed. These modules will be housed in a composite battery casing, along with the electronic control and regulation systems required for safe operation. Your responsibilities will also include performing structural analysis, overseeing laser welding processes, and working with composite materials.

In addition, you will also be responsible for the design of the **water cooling system** for the motors and drives, as well as the **air cooling system** for the individual battery cells. This will involve performing heat calculations to ensure the cells can operate within their specified thermal limits and sustain the power demands placed on the battery.

Profile

- Bachelor/Master Engineering Science, Engineering Technology or Business Engineering
- Basic knowledge of Electrical machines
- Experience with CAD design/FEM-software
- Interest in CFD-software for heat simulations

Returns

- Hands-on experience in a competitive environment
- Gain exposure to cutting-edge technologies and industry-leading organizations
- Possibility to network and cooperate with (motorsport related) stakeholders
- A summer packed with international racing competitions!

Up for the challenge?



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