



Vehicle Dynamics

Controls and Performance Engineer

Green innovation meets performance

Our Project

Formula Electric Belgium is a team of engineering students who build a **Formula Student race car** 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. Next year, we will be competing in both the **electrical** and **driverless** competition. You can join the project during one or two years by applying for the '**Postgraduate in Innovation and Entrepreneurship in Engineering**'.

Tasks

As a vehicle dynamics control engineer, you will work on control algorithms to improve vehicle handling, such as torque vectoring and semi-active suspension control. You will develop these algorithms in the MATLAB/Simulink environment and then download them to the ECU in C++.

You will also need to select the most appropriate sensors to implement in the car and work with the kinematics engineer to define the load cases and analyze tire data.

You will also analyze test data to gain insight into how the car and driver are performing and where improvements can be made. A lap time simulation should also be performed using software to anticipate optimal setup and design choices during the concept phase of the project.

Profile

- Bachelor/Master Engineering Science, Engineering Technology or Business Engineering
- Basic knowledge about vehicle dynamics
- Experience using MATLAB and preferably C++ as well
- Out-of-the box thinking
- Good problem-solving skills

Returns

- 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 lifetime!

Up for the challenge?



Submit your **resume** and **motivation letter** (one page) to
<https://formulaelectric.be/vacancies-theses/>