Initial situation:
Current mobility concepts in the automotive and aviation industries are currently undergoing radical change. Stricter CO₂ limits on the part of politicians and the changing environmental awareness on the part of the population present the entire mobility industry with new challenges. The core challenge in the aviation industry is to develop innovative mobility concepts and test them in practice. This development focuses in particular on emission-free drives in combination with intelligent mobility concepts.
Together with a partner from the aircraft industry, the PEM of RWTH Aachen University is currently involved in an exciting research project in the field of Electric Vertical Take-Off and Landing Aircrafts (eVTOLs). The overall goal of the project is to develop a digital production system that will enable the mass production of e-mobility components for such electric jets, which have been unusual in the aircraft industry up until now.

Your task:
Within the scope of the research project, your task will be to conduct a product and process requirement analysis for the drive train and traction battery of eVTOLs. In a first step, electric jets will be structured into main components and modules based on certain characteristics. For these, technical production requirements and restrictions will then be identified. The eVTOL of the project partner will be used as the application object.
Based on this product information, the second step is to identify the requirements for the assembly processes for eVTOLs. In particular, the focus will be on the electric powertrain and the traction battery. In this way, requirements for the production process are worked out and it is ensured that the product can be implemented in terms of production technology. In addition, the sequence of the assembly processes is examined. The mapping is preferably done in an assembly priority graph.

Your requirements:
– Studies in mechanical engineering or industrial engineering (or comparable)
– Interest in electric mobility
– High motivation and commitment
– High communication skills
– Great commitment
– Very good language skills in German or English

Our offer:
– Comprehensive support
– Delimited tasks, fast familiarisation possible
– Expert insight into the aviation industry
– Integration into an exciting research project at RWTH Aachen University
– Publication in the course of a bachelor or master thesis possible

Are you interested?
Please send a short letter of motivation and a current excerpt of your grades as well as your curriculum vitae and certificates to the e-mail address below.

Your contact at PEM:
Andreas Kraus, M.Sc. RWTH Campus-Boulevard 30 D-52074 Aachen M: +49 (0) 151 41881035 a.kraus@pem.rwth-aachen.de