## Design of scaled down wind turbine for wind tunnel experiments

In this project you will work beside other members of the student competition team for small wind turbine, and learn basics of wind turbine design, wind energy and how to apply scaling rules on the current real size wind turbine to design a scaled wind turbine for wind tunnel experiments. The scaled model should be designed based on aerodynamic ratios reported by aerodynamic design team. The primary goal is to create a CAD model of the turbine, which has aerodynamic similarities, and the Design for Manufacturing (DFM) considerations should be considered in the CAD model.

Requirements:

- CAD design of a small-scale model of wind turbine using Siemens NX together with Simcenter3D, or equivalent
- Learn and apply DFM technics on your design and validate the design by simple simulations
- Preparation of the report of your work including 2D drawings, exploded views, and BoM
- Contribution to the final report of the team for the competition
- Contribution in preparation of the wind turbine
- Participation in weekly team meetings (online for remote students)
- Teamwork and communication with other team members
- Intermediate English knowledge or above

For more information about our team, visit the page:
https://www.hs-emden-leer.de/studierende/fachbereiche/technik/projekte/wind-challenge

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