

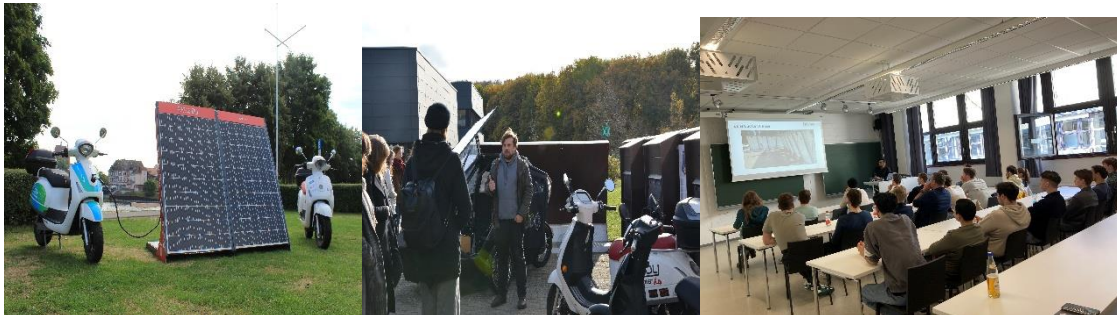


Bobby- Decentralized Energy Hub for Sustainable Mobility

Ansprechpartner:innen	Prof. Dr.-Ing. Semih Severengiz semih.severengiz@hs-bochum.de Noman Hanifa Noman.hanifa@hs-bochum.de
Teilnehmendenzahl	bis zu 15 Personen
Unterrichtssprache	Englisch
KickOff-Termin	01 April. 2025 13:00 Uhr/D3-08

About Project: As part of the BOBby project, in this semester we aim to further develop our milestone initiative, the 'Energy Hub' which is an off grid solar charging station for the light electrical vehicles, by integrating innovative approaches. These include the potential addition of hydrogen, advancements in data collection techniques, the expansion into an Energy Quarter, and the implementation of effective teaching practices based on problem-based learning. This conceptual framework is aligned with several third-party funded projects by the German Federal Ministry of the Education and Research and European Union.

Goal: The primary objective of this semester's BOBby project is to conduct both an on-site and theoretical evaluation of how these ideas can be effectively implemented



Tasks: Students can choose one of the following tasks

1. **Feasibility of Integrated Hydrogen:** As hydrogen is expected to play a key role in the energy transition, students should conduct a preliminary techno-economic assessment, perform a life cycle analysis, and identify potential use cases of the integrated Energy Hub.
2. **Real time Data Collection Techniques:** Data collection is crucial for analyzing such systems and requires continuous improvements. This task may involve optimizing the existing system, such as integrating sensors, developing interactive visualizations, or other enhancements.
3. **Integration into a Future Energy Quarter:** Students should explore how the energy hub or a similar solar station could be incorporated into a future energy quarter in Drolshagen. The task could interaction with the stakeholders and city planners and sustainability assessment of the use case.
4. **Effective Teaching Practices:** Students will develop an example of effective teaching practices or curriculum based on problem-based learning techniques.