

Seminar in Business Analytics:

Digital Energy Solutions for Sustainable Urban Communities

Winter Term 2023/24

Course Description:

Addressing climate change is a major challenge for research and practice. To ease the integration of renewable energies, the European Union is supporting research projects throughout European cities. This seminar takes place in cooperation with one of these projects: The SPARCS project is creating a network of Sustainable energy Positive & zero cARbon Communities in European cities. The project supports these cities as they deal with the multifaceted challenges they face on their path to sustainability. By setting up inclusive management and planning models and processes, SPARCS aims to demonstrate and validate innovative solutions for smart and integrated energy systems that will transform these cities into sustainable, zero carbon ecosystems with improved quality of life for their citizens (www.sparcs.info).



During the seminar, energy and technology experts will present different approaches to implement renewable energy systems and products in urban environments. Each of these approaches is then made available as topics for seminar papers. We will discuss the following topics:

- Virtual Power Plants
- E-Mobility integration
- District Heating Optimization
- Solar thermal energy generation
- Smart Energy Household Products
- Digital Twins of Urban Environments

Target Group:

This seminar specifically addresses students all IMP disciplines, as well as in the M.Sc. Economics and M.Sc. VWL programs. There are no formal prerequisites.

Organization:

Registration: **By October 9, 2023**

Application via email to simon.albrecht@is.uni-freiburg.de. **Make sure that the following information is provided:**

- First name, last name
- Matriculation number (Matrikelnummer)
- Transcript of records
- Attended lectures and seminars at our chair and grade obtained
- Study program, semester

Response whether application was successful will be sent out shortly after the registration deadline.

First meeting:	October 26, 2023 at 16ct, online
Expert Presentations:	Will be announced in seminar
Student Presentations:	January 31, 2024 at 16ct, online
Written submission:	March 31, 2024

Communication:

Communication is done via email.

Topics:

Exact topics along with hints on literature will be announced in the seminar.

Policies and Procedures:

Grading: Written report 67%, oral presentation 33%.

ECTS: 6

Credit points are applicable to:

- M.Sc. BWL PNPM: Allgemeine BWL, Wirtschaftsinformatik
- M.Sc. VWL (2011): BWL, Wirtschaftsinformatik
- M.Sc. VWL (2014): Business Analytics
- M.Sc. Economics: Elective in Information Systems and Network Economics profile
- M.Sc. Computer Science: Wahlmodule BWL und VWL

Chair:

Albert-Ludwigs-Universität Freiburg
Prof. Dr. Dirk Neumann
Department of Information Systems
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