

## Production and Logistics

### Project Seminar - Quantitative Methods for Business

#### Module objectives and intended study results:

The students

- ▶ become acquainted with selected management problems that can be solved by using quantitative methods,
- ▶ have the ability to develop Spreadsheet models to support real-life decision making,
- ▶ can write comprehensive and convincing project reports and present their results,
- ▶ develop the ability to create solutions for case studies in teams. This includes an agreed upon division of labor, the ability to solve team-internal conflicts, and communication as well as social competencies,
- ▶ are empowered to acquire knowledge of new topics through self-study of the pre-specified literature in a short amount of time

#### Content

The module combines lectures, software tutorials, as well as solution and presentation of exercises/(small) case studies. We will apply quantitative methods from Project Scheduling, Linear Programming, Inventory Control, Queueing Theory, and Simulation using the spreadsheet modeling approach. Students work in groups to solve the exercise sheets and write a solution report. Students should have access to a computer with Microsoft Excel (latest version in English language is recommended, as this will be used by the tutors). To assist their studies, students are required to read given textbook chapters.

**Spreadsheet software tutorials** are supported by › DataCamp (<https://www.datacamp.com/>), an intuitive learning platform for data science and analytics. Learn any time, anywhere and become an expert in R, Python, SQL, and more. DataCamp's learn-by-do methodology combines short expert videos and hands-on-the-keyboard exercises to help learners retain knowledge. DataCamp offers 350+ courses by expert instructors on topics such as importing data, data visualization, and machine learning. They're constantly expanding their curriculum to keep up with the latest technology trends and to provide the best learning experience for all skill levels.

**Prerequisites:** Business Decision Analysis

**Credits:** This seminar will give credit towards

- ▶ IBE Compulsory module project seminar

**Language:** Seminar language is English

**Next time offered in:** Winter Semester 2024/2025