

# Lecture (M.Sc.)

# Forecasting

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**Dr. Dominik Heinisch**

**Winter Term 2022-23**

Time & Location: Tuesday, 16:00-18:00 (first session on November 1, 2022)

Room: Room 0211 (Nora-Platiel-Strasse 6).

6 Credits: **MSc Economic Behavior and Governance** (Module 1b); **MSc Business Studies** (Module: METHODS)

## Scope and Format:

Even though predictions often go wrong, they are everywhere. But why is it so difficult to foresee the future, and is there any chance to improve? Or are we hopelessly lost to the fortune of coincidences? In this course, we will go on an adventurous journey through the universe of forecasting. Starting from chaos leaving for determinism, and always seeking signals from the future that will guide us to enlightenment. We will learn how easily we could be misled on the wrong track by noisy data and/or our intuition. We will understand what makes a good forecast and how forecasts can be translated into helpful decisions. The journey will be less theoretically motivated and more focused on real-world problems and good enough solutions. The lecture aims at giving a general understanding of different forecasting techniques in the forecaster's daily life (focusing on data-driven approaches): statistics, econometrics, and machine learning techniques combined with concepts from behavioral economics and a lot of practical knowledge and insights.

**For successful participation in the course, prior knowledge of econometrics is required. Please register only if you have completed an econometrics course before.**

## Credit requirements:

Presentations with (short) assignment (approx. 5-10 pages)

Preparation and active participation in seminars.

## Registration required:

Please register by sending an email to [kristina.blankennagel@uni-kassel.de](mailto:kristina.blankennagel@uni-kassel.de) (registration closes on October 15).

## **Outline**

- 1. Introduction (November 1)**
- 2. Basic Concepts (November 6)**
- 3. Statistical forecasting techniques I (November 13)**
- 4. Statistical forecasting techniques II (November 20)**
- 5. Measuring forecast quality (November 27)**
- 6. Forecasting without data (December 4)**
- 7. Updating (December 11)**
- 8. Super-Forecasters (December 18)**
- 9. A better Crystal Ball (January 10)**
- 10. Communicating Forecasts (January 17)**
- 11. Man vs. Machine (January 24)**
- 12. Biases Nudges (January 31)**
- 13. Open Topics (so far not predictable) (February 7)**

**Additionally one / two Saturday(s) (9 am. to 5 pm., approx. end of January): Student Presentations**