Georg-August-Universität Göttingen **Module M.WIWI-QMW.0036: Economic and Business Forecasting**	6 C 4 WLH

Learning outcome, core skills: The students: • learn basic concepts of prediction that develop, for instance, from regression or time series models, • gain a solid understanding of issues related to the evaluation of alternative predictors, • learn how to analyze empirical data by means of statistical software packages with a particular focus on forecasting exercises.	**Workload:** Attendance time: 56 h Self-study time: 124 h

Course: M.WIWI-QMW.0036.Lec **Economic and Business Forecasting** (Lecture) *Contents*: Forecasts are produced in numerous areas such as business, economics, finance and many other fields. Forecasts are useful if they help to improve the decision-making process. The lecture provides an introduction to statistical/econometric methods to produce and evaluate forecasts. We discuss different type of loss functions, forecasting frameworks, statistical models, and optimal point predictions for selected loss functions along with the classical forecasting techniques (e.g. regression and univariate time series models). To monitor forecast performance we will discuss evaluation of single and multiple forecast methods. Selected topics will also deal with density and interval forecasts as well as forecast combination methods. Examples from applied forecasting will be used to illustrate the concepts throughout the lecture.	2 WLH
Course: M.WIWI-QMW.0036.Ex **Economic and Business Forecasting** (Exercise) *Contents*: Practical and theoretical exercises covering the content of the lecture. Implementation of forecasting exercises with common statistical software (e.g. R or Matlab). Interpretation of estimation results.	2 WLH
Examination: Written examination (60 minutes) or oral examination (approx. 20 minutes) M.WIWI-QMW.0036.Mp: Economic and Business Forecasting	6 C

Examination requirements: • The students show their familiarity with established forecasting models as well as with their implementation and economic and statistical evaluation, • the students are able to implement alternative predictors by means of statistical software, • they can critically discuss the (complementary) informational content of alternative predictors and interpret the corresponding results, • the exam covers both theoretical aspects of prediction and forecast evaluation as well as discussions of practical exercises.	

Admission requirements:	**Recommended previous knowledge:**
none	M.WIWI-QMW.0004 Econometrics I

	M.WIWI-QMW.0009 Introduction to Time Series Analysis
Language: English	**Person responsible for module:** Prof. Dr. Helmut Herwartz
Course frequency: each winter semester	**Duration:** 1 semester[s]
Number of repeat examinations permitted: twice	**Recommended semester:** 2 - 4