

Georg-August-Universität Göttingen Module B.WIWI-QMW.0012: Introduction to Bayes and Statistical Learning		6 C 4 WLH
Learning outcome, core skills: After successful participation in the module the students are capable of choosing the statistical approach for a scientific question. They can apply advanced statistical methods in established softwarepackages and implement simpler models. Hence they are capable of analysing a dataset from scratch autonomously.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: B.WIWI-QMW.0012.Lec Introduction to Bayes and Statistical Learning (Lecture) <i>Contents:</i> 1. (Repetition) basic inference (frequentist Estimation/Likelihoodinference) 2. (Repetition) simpler regression models (lineare models, generalised linear models) 3. Introduction to Bayesian inference 4. Introduction to statistical learning 5. More complex statistical models (e.g. P-Splines, Mixed Models, Quantile regression, GAMLSS...)		2 WLH
Course: B.WIWI-QMW.0012.Ex Introduction to Bayes and Statistical Learning (Exercise) <i>Contents:</i> In the practical session, knowledge will be extended and intensified theoretically and practically (in R).		2 WLH
Examination: Written examination (90 minutes) B.WIWI-QMW.0012.Mp: Introduction to Bayes and Statistical Learning Examination prerequisites: Submission of 50% of the exercise sheets		6 C
Examination requirements: • Demonstration of the capability to analyse complex datasets, • evidence of knowledge in implementing the learned modelling approaches, • evidence of theoretical understanding the learned inference strategies.		
Admission requirements: none	Recommended previous knowledge: B.WIWI-QMW.0001 Linear Models and/or B.WIWI-VWL.0007 Econometrics	
Language: English	Person responsible for module: Prof. Dr. Elisabeth Bergherr	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 3 - 6	