

## **Module Overview of the doctoral degree programme "Applied Statistics and Empirical Methods" at the Georg-August-Universität Göttingen**

### **examination prerequisites within the framework of the doctoral degree programme**

Pre-requisites with a total rating of at least 27 credits should be successfully completed in accordance with the following provisions.

#### **1. Statistical methods**

At least two of the following modules with a total rating of 12 C should be successfully completed:

- M.WIWI-QMW.0001 Generalized Linear Models (6 C)
- M.WIWI-QMW.0002 Methods of Statistical Inference (Likelihood & Bayes) (6 C)
- M.WIWI-QMW.0005 Econometrics II (6 C)
- M.WIWI-QMW.0009 Time Series Analysis (6 C)
- M.WIWI-QMW.0010 Multivariate Procedures (6 C)
- M.WIWI-QMW.0011 Statistical Programming with R (6 C)
- M.WIWI-QMW.0016 Spatial Statistics (6 C)
- M.MED.0002 Longitudinal Data (6 C)
- M.MED.0003 Time-to-Event Analysis (6 C)
- SK.Bio.705 Data Mining for the Bioinformatics (6 C)
- M.Inf.1211 Probabilistic Data Models and their Applications (6 C)
- M.Mat.4541 Specialisation in the cycle "Applied and Mathematical Stochastic" (9 C)
- M.Mat.4542 Specialisation in the cycle "Stochastic Processes" (9 C)
- M.Mat.4543 Specialisation in the cycle "Stochastic Methods of the Business Mathematics" (9 C)
- M.Mat.4544 Specialisation in the cycle "Mathematical Statistics" (9 C)
- M.Mat.4545 Specialisation in the cycle "Statistical Modelling and Inference" (9 C)
- M.Mat.4641 Aspects in the cycle "Applied and Mathematical Stochastic" (6 C)
- M.Mat.4642 Aspects in the cycle "Stochastic Processes" (6 C)
- M.Mat.4643 Aspects in the cycle "Stochastic Methods of the Business Mathematics" (6 C)
- M.Mat.4644 Aspects in the cycle "Mathematical Statistics" (6 C)
- M.Mat.4645 Aspects in the cycle "Statistical Modelling and Inference" (6 C)
- P.SPS.01 Introduction to Mixed Models and Spatial Statistics (8 C)
- P.SPS.02 Advances in Spatial Statistics (4 C)
- P.SPS.03 Generalised Regression (4 C)

## 2. Specialisation

At least one of the following modules with a rating of 4 credits should be successfully completed:

- M.WIWI-BWL.0106 Topics in Quantitative Marketing and Economics (6 C)
- M.WIWI-QMW.0012 Multivariate Time Series Analysis (6 C)
- M.WIWI-QMW.0013 Applied Econometrics (6 C)
- M.WIWI-QMW.0019 Statistical Methods for Impact Evaluation (6 C)
- M.WIWI-VWL.0022 Analysis of Micro Data (6 C)
- M.WIWI-VWL.0041 Panel Data Econometrics (6 C)
- M.MED.0004 Clinical Studies (6 C)
- M.MED.0005 Statistical Methods for the Bioinformatics (6 C)
- B.Bio.701-1 Algorithms in Bioinformatics I (5 C)
- B.Bio.704 Algorithms in Bioinformatics II (5 C)
- M.Mat.4741 Special course in the cycle "Applied and Mathematical Stochastic" (3 C) M.Mat.4742  
Special course in the cycle "Stochastic Processes" (3 C)
- M.Mat.4743 Special course in the cycle "Stochastic Methods of the Business Mathematics" (3 C)
- M.Mat.4744 Special course in the cycle "Mathematical Statistics" (3 C)
- M.Mat.4745 Special course in the cycle "Statistical Modelling and Inference" (3 C)
- M.Mat.4841 Seminar course in the cycle "Applied and Mathematical Stochastic" (3 C)
- M.Mat.4842 Seminar course in the cycle "Stochastic Processes" (3 C)
- M.Mat.4843 Seminar course in the cycle "Stochastic Methods of the Business Mathematics" (3 C)
- M.Mat.4844 Seminar course in the cycle "Mathematical Statistics" (3 C)
- M.Mat.4845 Seminar course in the cycle "Statistical Modelling and Inference" (3 C)
- M.Mat.4941 Advanced seminar course in the cycle "Applied and Mathematical Stochastic" (3 C)
- M.Mat.4942 Advanced seminar course in the cycle "Stochastic Processes" (3 C)
- M.Mat.4943 Advanced seminar course in the cycle "Stochastic Methods of the Business Mathematics" (3 C)
- M.Mat.4944 Advanced seminar course in the cycle "Mathematical Statistics" (3 C)
- M.Mat.4945 Advanced seminar course in the cycle "Statistical Modelling and Inference" (3 C)
- P.Forst.110 Spatial statistics (3 C)
- M.Forst.1422 Remote Sensing and GIS (6 C)
- M.Forst.1513 Monitoring of forest resources (6 C)
- M.Forst.1609 Remote sensing image processing with open source software (6 C)
- PAG 0060 Advanced methods in animal breeding and statistical genetics (6 C)
- PAG 0065 Market Integration and Price Transmission (6 C)

- PAG 0043 Efficiency and Productivity Analysis: Stochastic Approaches (6 C)  
PAG 0070 Risk Analysis and Risk Management in Agriculture (6 C)  
GRK1666.ME04 Consumer behavior and demand analysis: Theory and applications (3 C)  
PAG 0073 Consumer Behavior and Demand Analysis II: Theory and Applications (6 C)  
PAG 0080 Statistical Methods and Analyses in the Agricultural Sciences (6 C)

### **3. Research course**

At least one of the following modules with a rating of 4 credits should be successfully completed:

- P.ASEM.0001 Research seminar course (4 C)

### **4. Summer schools/Conferences**

At least one of the following modules with a rating of 3 credits should be successfully completed:

- P.ASEM.0002 Summer schools (2 C)  
P.ASEM.0003 Conferences (1 C)

### **5. Key competences**

Modules have to be successfully completed in the total rating of at least 4 C in order to acquire key competences (e.g. good scientific practice, scientific writing, career planning, presentation techniques, diversity, etc.). More specific details are to be agreed between the thesis committee and the doctoral candidate.