Georg-August-Universität Göttingen **Module M.WIWI-QMW.0041: Stochastic Processes**	6 C 4 WLH

Learning outcome, core skills: Upon completion of the module, the students have acquired the following competencies: • familiarity with concepts of different stochastic processes, • experience in the practical analysis of modeling data via stochastic processes, • interpretation of the results of such models.	**Workload:** Attendance time: 56 h Self-study time: 124 h

Course: M.WIWI-QMW.0041.Lec **Stochastic Processes** (Lecture) *Contents*: Stochastic processes in discrete and continuous time such as Wiener processes, Poisson processes, Markov chains, Markov processes.	2 WLH
Course: M.WIWI-QMW.0041.Ex **Stochastic Processes** (Exercise) *Contents*: In the accompanying exercise, students deepen and expand the knowledge and skills acquired in the lecture.	2 WLH
Examination: Written examination (90 minutes) or oral examination (approx. 25 minutes) M.WIWI-QMW.0041.Mp: Stochastic Processes	6 C

Examination requirements: The students show in the exam that they have learned to perform the steps and calculations involved in analyses of stochastic processes. They can choose the most appropriate model for a given problem and can implement this model in statistical software. In addition, the resulting estimates can be interpreted and the results can be critically evaluated. The exam covers contents of both the lecture and the exercise class.	

Admission requirements: none	**Recommended previous knowledge:** Basic knowledge of statistical modelling, M.WIWI-QMW.0002 Advanced Statistical Inference (Likelihood & Bayes)
Language: English	**Person responsible for module:** Prof. Dr. Elisabeth Bergherr
Course frequency: once a year	**Duration:** 1 semester[s]
Number of repeat examinations permitted: twice	**Recommended semester:** 2 - 3