Module variant to: Foundations of Microbiology

Module: Quality Management in Microbiological Laboratories	
University/Department/Teaching Unit: Freie Universität Berlin/Department of Biology, Chemistry, Pharmacy/Biology	
Module coordinator: Dr. Janine Kleymann-Hilmes, Sophia Sohns, (from RKI)	
Prerequisites: In order to participate in the QM using the example of microbiology laboratories module, completion of Part 1 Laboratory biosafety and biosecurity is required.	
Learning objectives: Students possess additional knowledge, skills, and implementation-oriented competencies beyond their specialized academic studies that are conducive to professional activities. At the end of the course, students will have mastered the principles and methods of quality management. They will be able to orient themselves in a quality management-led laboratory. In doing so, they have acquired knowledge of the relevant national and international regulations and are able to assess the necessary quality assurance tools of laboratories.	
Content: The seminar and the exercise will be an introduction to quality management and the added value this brings to laboratories. In addition, the use of quality management tools in laboratories, for example, will be worked out interactively with the participants in group work. A quality management system is mandatory for medical laboratories in Germany. In preparation for this there will be an introduction to quality management, terms, basics and regulations and the added value this brings to laboratories. Quality management is taught, including the implementation of appropriate organizational structures, procedures, processes and methods, and offers further guidance on laboratory safety. In addition, the use of quality management tools in laboratories, will be worked out interactively with the participants in group work.	

Modes of instruction	**Contact hours** (hours per week during the semester)	**Types of active participation**	**Workload** (in hours)	
Seminar (S)	1	–	Class attendance (seminar) Preparation, before and after (seminar)	15 15
Practice sessions (Ü)	2	Carrying out and documenting experiments in the lab	Class attendance (practice session) Preparation, before and after (practice session) Exam preparation and exam	30 15 75
Module assessment		Written exam (60 minutes), wholly or partially in multiple-choice format; can also be carried out electronically or written report on research results (approx. 10 pages) or examination colloquium (approx. 20 minutes)		
Language		English		
Regular attendance required		yes		
Total workload		150 hours		5 credit points
Duration		one semester		
Frequency		irregular		
Applicability		Master's degree program M.Sc. Biology		

Utilization in the following specializations (decision by the examining board):

Biodiversity, Evolution and Ecology	
Genetics and Genomics	
Microbiology	X
Molecular- and Cellular Biology	X
Molecular Plant Sciences	
Neurobiology	
Biology	X