Number of module	**Name of module**	**Lecturer**
BIWE-01	Design of Concrete Structures	Prof. Curbach
Content and qualification aim	Content of the module: • concrete properties which are of relevance for design, • load bearing behaviour under multi-axial loading, • special characteristics of the material concrete as a basis for modelling, • design methods for reinforced concrete members according to existing codes and • technical regulations including methods for plausibility check, • special strengthening methods for reinforced concrete members and their calculation • models, e.g. shotcrete, steel lamellae, FRP systems or TRC for strengthening. After having finished the module successfully students are able to purposefully decide on material parameters for concrete, to check results of calculation software for plausibility as well as to design and calculate strengthening measures of existing RC structures.	
Type of course	2 hours of lectures, 1 hour of exercise per week, and self-study	
Requirements for study	Knowledge from modules BIWO-01 and BIWO-05	
Practical use of the module	The module is one of the elective modules in the Master´s programme: Advanced Computational and Civil Engineering Structural Studies, of which seven have to be chosen.	
Requirements for the award of credits	The credits are awarded if the module examination is successfully passed. The module examination consists of a written examination (90 min).	
Credits and grades	4 credits can be acquired for this module. The grade is the grade of the written examination.	
Frequency of module	The module is offered every academic year (summer semester).	
Workload	The workload is 120 working hours.	
Duration of the module	1 semester	
Recommended literature	Fib bulletin 17: Management, maintenance and strengthening of concrete structures	