Module Number	**Module Name**	**Lecturers**
BIWE-03	Timber and Lightweight Structures	Prof. Stroetmann
Content and qualification aim	Content of the module: • Mechanical and physical basics of timber and its derivatives, and their consequences for use in a construction • Situation of resources and transformation processes of raw wood for timber structures • Wood modification • Timber joints and structural behaviour • Composite structures with concrete, fibres and textiles • Selected examples of wood buildings demonstrating the current state of timber construction and its special features • Historical timber structures, reconstruction and rehabilitation • Stability, fatigue and service strength of steel constructions • Wired steel constructions – types of wire and fasteners; design, construction and assessment • Structures made of textile membrane and plastic foils combined with steel construction elements After having finished the module successfully students have a good command of design, construction and calculation of timber and lightweight structures.	
Type of course	2 hours of lectures, 1 hour of exercise per week, and self-study	
Requirements for study	Knowledge of steel and timber materials, basic knowledge of analysis and construction of steel structures, and geometrical and physical non-linear analysis at Bachelor's level and from modules BIWO-01 and BIWO-03 as well as study competence from module 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 (150 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	