

Module code (1.)	Module description (2.)	Category (3.)
MBI 2940 Stand: 07.10.2021	Floating Concrete (FC)	Int. Master
	Degree program (4.)	Sustainable Engineering of Infrastructure
	Faculty (5.)	Civil Engineering and Conservation / Restoration

Module supervisor (6.)	Prof. Dr.-Ing. Ralf W. Arndt
Type of module (7.)	W (elective)
Frequency (8.)	Every 2 years in WiSe in the year prior to the concrete canoe race, i.e. 2023 and probably 2025.
Standard semester of study (9.)	2nd semester
Credits (ECTS) (10.)	2 ETCS
Assessment (11.)	Coursework <ul style="list-style-type: none"> • contribution to the planning, designing and construction of a concrete canoe as well as planning our participation in the concrete canoe race in the following summer semester. • assessed on a pass/fail basis
Language of instruction (12.)	German
Admission requirements (13.)	Basics of building materials science
Module is a requirement for (14.)	-
Module duration (15.)	1 semester
Mandatory registration (16.)	no
Applicability of module (17.)	Civil Engineering and others

Course (18.)	Lecturer (19.)	Type (20.)	No. of students (max.) (21.)	No. of courses per week (22.)	Contact hours per week (23.)	Workload		
						Face-to-face (24.)	Self-study (25.)	
1 SC	Prof. Dr. Arndt	Seminar	20	1	2	30	30	
2								
Total						2	30	30
Workload for the module (26.)							60	

Qualification objectives (27.)	After successful participation in the module, students will have knowledge of the special features of the use of special types of concrete, their production and testing, as well as the latest developments, particularly with regard to water-impermeable and floating concrete, and the basic principles of buoyancy and boat construction.
Course contents (28.)	In the module, the following contents, among others, are elaborated:

	<ul style="list-style-type: none"> • Lightweight concrete • Infra-light concrete • High-strength concrete • High performance concrete • Ultra-high strength concrete • Water impermeable concrete • Self-compacting concrete • Fiber concrete • Concrete pressure • Floating concrete • Sustainable concrete • Boat building and buoyancy <p>etc.</p>
Preliminary exam requirements and assessment	<p>(29.)</p> <ul style="list-style-type: none"> • none
Literature	<p>Lectures and lecture notes as well as:</p> <ul style="list-style-type: none"> • Betonprüfung nach Norm, Schriftenreihe der Beton und Zementindustrie • Bauteilkatalog, Schriftenreihe der Beton und Zementindustrie • Betontechnische Daten, von Zement- und Betonherstellern • Scholz, W. und Hiese, W.: Baustoffkenntnis Werner Verlag • Produktunterlagen der Baustofflieferanten <p>(30.)</p>