

Time schedule CM02 Summer sem. 2021 - Lectures Tue. 8:00-9:50, Tue. 10:00-11:50, Tutorials Mo 14:00-15:50, Tutorials: Hájek, R.

	Lecturer	Lectures (in total 24-26)	Tutorials (in total 12)
1 Tue 16.2.	Hájek	PS 1 Precast structures – differences in design, temporary design situations, execution, Systems and elements of precast structures, Multistorey buildings	15.2. PS 1 Composite concrete – concrete structure – design on ULS
2 Tue 16.2.	Hájek	PS 2 Precast structures – Design of elements, fastening elements, lifting anchors	
3 Tue 23.2.	Hájek	PS 3 Joints in precast structures, structural performance, numerical modelling	22.2. PS 2 Composite concrete-concrete structure – verification of stresses, simple drawing
4 Tue 23.2.	Hájek	PS 4 Composite structures (concrete – concrete)	
5 Tue 2.3.	Hájek	PS 5 Precast structures – industrial halls	1.3. Masonry 1 Preliminary design of masonry building, verification of the compressed member
6 Tue 2.3.	Broukalová	MS 1 Masonry structures – terminology, compressed members, concentrated compression	
7 Tue 9.3.	Broukalová	MS 2 Masonry bending, shear general models, simplified models	8.3. Masonry 2 Verification of the underground wall (ULS) subjected to the earth pressure
8 Tue 9.3.	Broukalová	MS 3 Reinforced masonry – transversal reinforcement	
9 Tue 16.3.	Broukalová	MS 4 Masonry – longitudinal reinforcement	15.3. Masonry 3 Verification of the non-bearing wall subjected to the wind load Test no. 1 Precast
10 Tue 16.3.	Broukalová	MS 5 Masonry – strengthening of masonry structures	
11 Tue 23.3.	Broukalová	Fibre concrete	
12 Tue 23.3.	Vítek	SLS 1 ULS and SLS differences, Loading combinations, RC struct. State I and II, Effective section, stress analysis	22.3. RC slab 1 Design on ULS, reinforcement
13 Tue 30.3.	Vítek	SLS 2 Limitation of stress, Crack origin, Crack width analysis, limits of the crack width	
14 Tue 30.3.	Vítek	SLS 3 Deformations of RC structures, General method, Simplified methods, Deflection analysis of the RC beam	29.3. RC slab 2 Crack width analysis Test no. 2 Masonry
15 Tue 6.4.	Vítek	SLS 4 Design of RC structures on ULS and SLS, Thickness of slabs, Depth of beams, Construction sequence, Watertight structures	
16 Tue 6.4.	Vítek	PC 1 Introduction to PC, Basic principles, Advantages, Materials for PC structures	
17 Tue 13.4.	Vítek	PC 2 Design of prestressing, prestress losses, prestressing during the service life	12.4. RC slab 3 Deflection analysis
18 Tue 13.4.	Vítek	PC 3 Technology of prestressing, pre and post tensioning, anchors, prestressing process	
19 Tue 20.4	Vítek	CB 1 Concrete bridges 1 – Introduction to bridges	19.4. Prestressed beam 1 Design of the geometry, loading, parameters of the cross-section
20 Tue 20.4.	Vítek	CB 2 Terminology	

21 Tue 27.4.	Vitek	CB 3 Structural systems	26.4. Prestressed beam 2 Design of prestressing. Test no. 3 SLS
22 Tue 27.4.	Vitek	CB 4 Construction technologies	
23 Tue 4.5.	Vitek	CB 5 Loading of bridges	3.5. Prestressed beam 3 Verification of axial stresses, ULS in bending Test no. 4 Prestressed concrete
24 Tue 4.5.	Vitek	ES 1 Engineering structures 1 Introduction to engineering structures	
25 Tue 11.5.		Reserve	10.5. Consultancy. Final check and assessments.
26 Tue 11.5.		Reserve	

General conditions

Assessment

- Absence max. 1/3 i.e. **min. 8 times students must be present**
- Passing min. 2 from 4 tests in tutorials
- Submission of all 4 exercises in adequate quality

Examination

- Assessment completed
- Successful passing of the examination test (min.50% of points). Results of the tests in tutorials may be supporting.

Review of exercises

1. Composite concrete – concrete structure, design ULS, verification SLS
2. Masonry – 3 separate tasks
3. SLS Precast panel – design of reinforcement (ULS), crack width analysis, deflection analysis
4. Prestressed beam – design of the geometry design of prestressing, verification of stresses in SLS and ULS in bending