

Time schedule CM02 - Lectures Mo. 16:00-17:50, We. 14:00-15:50, Tutorials We. 16-17:50
Summer semester 2015

	Lecturer	Lectures (in total 24-26)	Tutorials (in total 13)
1M 16.2.	Vítek	SLS 1 ULS and SLS differences, Loading combinations, RC struct. State I and II, Effective section, stress analysis	18.2. PC slab 1 Design on ULS, reinforcement
2W 18.2.	Vítek	SLS 2 Limitation of stress, Crack origin, Crack width analysis, limits of the crack width	
3M 23.2.	Vítek	SLS 3 Deformations of RC structures, General method, Simplified methods, Deflection analysis of the RC beam	25.2. PC slab 2 Crack width analysis
4W 25.2.	Vítek	SLS 4 Design of RC structures on ULS and SLS, Thickness of slabs, Depth of beams, Construction sequence	
5M 2.3.	Vítek	SLS 5 Watertight structures, Principles of the design, Concrete, Reinforcement, Joints	4.3. PC slab 3 Deflection analysis Test no. 1 SLS
6W 4.3.	Vítek	PC 1 Introduction to PC, Basic principles, Advantages, Materials for PC structures	
7M 9.3.	Vítek	PC 2 Design of prestressing, prestress losses, prestressing during the service life	11.3. Prestressed beam 1 Design of the geometry, loading, parameters of the cross-section
8W 11.3.	Vítek	PC 3 Technology of prestressing, pre and post tensioning, anchors, prestressing process	
9M 16.3.	Vráblík	PC 4 Verification of SLS and ULS in bending and shear	18.3. Prestressed beam 2 Design of prestressing.
10W 18.3.	Vráblík	PC 5 Application of PC in buildings, eng. structures and bridges	
11M 23.3.	Borukalová	MS 1 Masonry structures – terminology, compressed members, concentrated compression	25.3. Prestressed beam 3 Verification of axial stresses, ULS in bending Test no. 2 Prestressed concrete
12W 25.3.	Broukalová	MS 2 Masonry bending, shear general models, simplified models	
13M 30.3.	Broukalová	MS 3 Reinforced masonry – transversal reinforcement	1.4. Masonry 1 Preliminary design of masonry building, verification of the compressed member
14W 1.4.	Broukalová	MS 4 Masonry – longitudinal reinforcement	
15W 8.4.	Broukalová	MS 5 Masonry – strengthening of masonry structures	8.4. Masonry 2 Verification of the underground wall (ULS) subjected to the earth pressure
16M 13.4.	Broukalová	PS 1 Precast structures – differences in design, temporary design situations, execution, Systems and elements of precast structures, Multistorey buildings	
17W 15.4.	Broukalová	PS 2 Precast structures – Design of elements, introduction to strut and tie models (D-regions), fastening elements, lifting anchors	15.4. Masonry 3 Verification of the non-bearing wall subjected to the wind load Test no. 3 Masonry
18M 20.4.	Foglar	PS 3 Joints in precast structures, structural performance, numerical modelling	

19W 22.4.	Foglar	PS 4 Composite structures (concrete – concrete)	22.4. PS 1 Composite concrete – concrete structure – design on ULS
20M 27.4.	Foglar	PS 5 Precast structures – industrial halls	
21W 29.4.	Šafář	CB 1 Concrete bridges 1 – Introduction to bridges, Terminology, Basic cross-section	29.4. PS 2 Composite concrete-concrete structure – verification of stresses, simple drawing Test no. 4 Precast
22M 4.5.	Šafář	CB 2 Concrete bridges 2 – Introduction to the design, structural systems	
23W 6.5	Šafář	CB 3 Bridge equipment, pavements, railway tracks	6.5. Final check Assessments
24M 11.5.	Vráblík	ES 1 Engineering structures 1 Introduction to engineering structures – examples, problems	
25W 13.5		Rector's day – No lecture	Rector's day – No tutorial

General conditions

Assessment

- Absence max. 1/3 i.e. **min. 8 x 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. SLS Precast panel – design of reinforcement (ULS), crack width analysis, deflection analysis
2. Prestressed beam – design of the geometry design of prestressing, verification of stresses and ULS in bending
3. Masonry – 3 separate tasks
4. Composite concrete – concrete structure, design ULS, verification SLS

Vítek

Prague, 1. 2. 2015