

## **Doctoral study – subjects (courses) list**

### **OBLIGATORY SUBJECT**

<b>Subject lecturer</b>	<b>Subject title</b>
Anita Cerić	Methodology of the scientific research

### **ELECTIVE SUBJECTS**

<b>GEOTECHNICAL ENGINEERING</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Meho Saša Kovačević, Lovorka Librić	Rock engineering
Danijela Jurić Kaćunić	Nondestructive testing in geotechnics
Meho Saša Kovačević, Lovorka Librić	Soil behaviour
Meho Saša Kovačević	Soil-structure interaction
Danijela Jurić Kaćunić	Triaxial testing
Meho Saša Kovačević	Karst hydrogeology
Mario Bačić	Flow processes and soil deformations
Tomislav Ivšić	Mechanics of granular materials

<b>WATER RESEARCH</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Damir Bekić	Hydrology – special chapters
Dalibor Carević	Interaction between sea and structures
Goran Gjetvaj	Ecohydraulics
Gordon Gilja	Drainage and irrigation
Neven Kuspilić	Sistem analyses of water resources
Neven Kuspilić	River engineering
Dražen Vouk	Nonpoint pollution sources control
Dražen Vouk	Chemistry in hydraulic engineering
Goran Lončar	Balanced methodology of modelling

Eva Ocvirk	Water resources management
Ivan Halkijević	Water supply systems for sustainable development
Ivan Halkijević	Scientific investigations in sanitary engineering
Kristina Potočki	Ecohydrology

<b>STRUCTURES</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Andelko Vlašić	Large bridges
Marija Kušter Marić	Aesthetics of bridges
Jelena Bleiziffer	Bridge management system
Ana Mandić Ivanković	Bridges under special conditions
Jelena Bleiziffer, Andelko Vlašić	Special chapters in bridge building
Joško Ožbolt, Marija Kušter Marić	Linear and nonlinear dynamics analyses of bridges
Ivan Lukačević	Methods of reliability engineering
Davor Skejić	Assessment of existing structures
Davor Skejić	Steel structure systems
Davor Skejić	The fatigue of materials and structures
Tomislav Kišiček	Contemporary methods of analysis of reinforced concrete structures
Ana Mandić Ivanković	Special chapters from prestressed concrete structures
Andelko Vlašić, Ivan Lukačević	Tall buildings
Vlatka Rajčić	Wood based composite structures
Vlatka Rajčić	Artificial intelligence

<b>MATERIALS</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Nina Štirmer	Special chapters on theory of concrete
Ana Baričević	Modern approach to durability of construction materials
Ivana Banjad Pečur, Marijana Serdar	Development and application of new materials
Nina Štirmer, Ivan Gabrijel	The simulation of materials structures and properties
Nina Štirmer	Quality management in construction materials
Ivana Banjad Pečur, Marijan Skazlić	Modern methods in material testing
Ivana Banjad Pečur, Bojan Milovanović	Pathology of insulating materials

<b>CONSTRUCTION MANGEMENT</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Mladen Vukomanović	Project management
Ivana Burcar Dunović	Project planning and control
Anita Cerić	Risk mangement in construction projects
Anita Cerić	Maintenance mangement and facilities mangement strategies
Ivica Završki	Modelling of organization processes
Ivica Završki	Reengineering of onstruction company
Ivica Završki	Logistic of building
Miljenko Antić	Organizational culture and organizational design
Lana Lovrenčić Butković	Marketing strategy in construction
Mladen Vukomanović	Informatics for managers

<b>TRANSPORTATION ENGINEERING</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Vesna Dragčević, Željko Korlaet	Theory of road alignment
Maja Ahac	Capacity of transportation facilities
Vesna Dragčević, Ivica Stančerić	Intersection design
Vesna Dragčević, Stjepan Lakušić	Special chapters about traffic noise
Ivo Haladin, Damir Lazarević	Theory of rail vehicle motion
Stjepan Lakušić	High speed tracks
Stjepan Lakušić, Maja Ahac	Optimization of railway lines
Tatjana Rukavina	Flexible pavements
Josipa Domitrović	Rigid pavements
Tatjana Rukavina	Pavement surface characteristics
Ivica Stančerić, Željko Korlaet	Theory of road vehicles movement
Dubravko Gajski	Photogrammetry - GIS

<b>ENGINEERING MECHANICS</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Domagoj Damjanović, Ivan Duvnjak	Nonlinear continuum mechanics
Ivan Duvnjak	Plasticity and creep in structural analysis
Domagoj Damjanović, Ivan Duvnjak	Numerical methods in theory of plasticity
Diana Šimić Penava	Special chapters on mechanics of materials
Diana Šimić Penava	The theory of the thin-walled bars with open profiles
Domagoj Damjanović	Experimental methods II
Marko Bartolac	Fracture mechanics
Marko Bartolac, Joško Ožbolt	Fracture mechanics in concrete structures
Ana Skender	Polymers in construction
Krešimir Fresl, Damir Lazarević	Numerical methods for discontinuous media
Damir Lazarević	Numerical models in structural dynamics

Damir Lazarević	Special chapters in structural dynamics and earthquake engineering
Mladen Meštrović Mario Uroš	3D plate analysis
Mladen Meštrović	Structural reliability analysis

<b>MATHEMATICS</b>	
<b>Subject lecturer</b>	<b>Subject title</b>
Vera Čuljak	Applied engineering mathematics
Kristina Ana Škreb	Applied statistics
Dora Pokaz	Differential geometry
Tomislav Došlić	Decision - making theory