Annotations of the Obligatory Subjects in the Bachelor´s Study in the Building Structures and Architecture Study Programme:

Subject: History of Architecture and Civil Engineering **2/0 cc 2Cr**

Guarantor: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD.
Lecturers: Ing. Oto Makýš, PhD, Ing. arch. Vladimíra Šimkovičová, PhD

Aim of the subject: History of world architecture and civil engineering from prehistoric times to the beginning of the 21st century. Analysis of significant structures.

Subject: Descriptive Geometry **2/2 e 5 Cr**

Guarantor: Assoc. Prof. RNDr. Martin Knor, PhD.
Lecturer: RNDr. Darina Kyselová

Aim of the subject: The student will acquire relevant knowledge and skills in the basics of parallel projection and its use in the following projections: Monge's projection, axonometry and dimensioning projection. Students will be able to deal with tasks involving simple and topographic planes. The basics of central projection will enable them to obtain practical experience in the projecting of civil engineering structures with a linear perspective. Students will acquire relevant knowledge about various planes in the civil engineering industry.

Subject: Mathematics I **2/3 e 6 Cr**

Guarantor: Prof. RNDr. Jozef Širáň, DrSc.
Lecturers: Assoc. Prof. RNDr. Katarína Trokanová, PhD, Assoc. Prof. RNDr. Ivan Žembery, PhD.

Aim of the subject: The course consists of two parts. In the first part the basic knowledge and skills are presented concerning the essential parts of algebra (including eigenvalues and eigenvectors) and 3D analytic geometry. The second part is devoted to basic calculus: the function of one variable, derivative and their properties and Taylor polynomials.

Subject: Geology for Architects and Civil Engineers **2/2 e 5Cr**

Guarantor: Prof. RNDr. František Baliak, PhD.
Lecturer: Prof. RNDr. František Baliak, PhD.

Aim of the subject: The student will study rocks from a geological point of view. He will also acquire knowledge about conditions of construction sites (geological, hydrogeological, geomorphological, tectonic and geodynamic processes). The student will be introduced to interactions between construction structures and their geological environment in Slovakia.

Subject: Surveying in the Building Industry **2/2 e 5 Cr**

Guarantor: Prof. Ing. Vlastimil Staněk, PhD.
Lecturers: Prof. Ing. Vlastimil Staněk, PhD, Ing. Gabriela Hostinová, PhD

Aim of the subject: The student will acquire knowledge of the basics for surveying in the building construction: surface projection, devices and tools for the measurement of angles, lengths and elevation, and measurement methods; basic geodesy for horizontal and altimetric surveys; marking geodetic points on co-ordinates; horizontal and altimetric surveys, maps and their utilization; measurement of areas and volumes; principles of laying out a building structure; laying out of angles, lengths, lines, points, elevations, altitudes, planes, arcs and building profiles; automation of measurement, numerical and projection work; documentation of surveying results and their utilization

Subject: Chemistry for Architects and Civil Engineers **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Vladimír Pavlík, PhD.
Lecturer: Assoc. Prof. Ing. Vladimír Pavlík, PhD.

Aim of the subject: The student will acquire knowledge of general chemistry – inorganic and organic; basic systemic knowledge essential for understanding the laws of chemistry, and properties of building materials, resulting from their chemical composition. The student will acquire knowledge about chemical reactions, using chemical equations and will learn to perform basic chemical calculations. Great attention is paid to silicon compounds, which form the basis of many natural and secondary raw materials for the building industry and form an inevitable part of silicate building materials. The target of the subject is also the explanation of processes of production of selected building materials and the main causes of their degradation. In addition, problems of water, air and environment connected with the protection and use of building materials are dealt with.

Subject: Technical Drawing **02 cc 2Cr**

Guarantor: Assoc. Prof. Žilinský Juraj, PhD.
Lecturer: Ing. Mária Gieciová, PhD.

Aim of the subject: Basic principles of drawing; design documentation; types and methods of projection; orientation towards increasing imagination and spatial vision; developing the ability to draw compounds of a structure and their assembly into integrated parts in accordance with technical and physical conditions.

Subject: Mathematics II **3/3 e 7 Cr**

Guarantor: Prof. RNDr. Jozef Širáň, DrSc.
Lecturers: Assoc. Prof. RNDr. Katarína Trokanová, PhD., Assoc.Prof. RNDr. Ivan Žembery PhD.

Aim of the subject: This course is composed of three parts. In the first part we present the basic integral calculus of a function of one variable and its geometric applications. Ordinary differential equations, mainly first order. ODE's and ordinary linear differential equations of higher orders are investigated in the second part. The last part is devoted to functions of several variables, their derivatives and basic properties.

Subject: Physics **2/2e 5 Cr**

Guarantor: Assoc. Prof. Ing. Juraj Veselský, PhD.

Lecturer: Assoc. Prof. Ing. Juraj Veselský, PhD.
Aim of the subject: The student will acquire relevant knowledge of the basics of the laws of classical mechanics and thermodynamics.

Subject: Building Construction 1 **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Gabriela Adamská, PhD.
Lecturers: Assoc. Prof. Ing. Gabriela Adamská, PhD, Ing.Viera Šebestová, PhD.

Aim of the subject: The student will acquire knowledge of the basic terminology of building constructions and structures, building documentation, tectonic principles in individual structures, interaction of their components, rigidity and stability of structures, laying out of building sites, excavations and foundations in connection with geological conditions, principles of foundations in relationship to the construction of a structural system and interaction between a building and foundation soil.

Subject: Building Materials **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Stanislav Unčík, PhD.
Lecturer: Assoc. Prof. Ing. Stanislav Unčík, PhD.

Aim of the subject: The student will acquire encyclopedic knowledge of all building materials. The course provides significant information concerning the physical and chemical characteristics of materials, their types, and methods of production, their suitable application and methods of testing their qualities. The knowledge acquired will furnish a basic orientation of the wide range of building materials necessary for a new engineer starting his career in a building practice.

Subject: Statics of Building Constructions **3/2e 7 Cr**

Guarantor: Prof. Ing. RNDr. Jozef Sumec, DrSc.
Lecturers: Prof. Ing. RNDr. Jozef Sumec, DrSc. Assoc. Prof. Ing. Oľga Ivánková, PhD.

Aim of the subject: Basic laws, principles, keywords and axioms of mechanics. The student will acquire knowledge of the statics of a material point, rigid plate and body and in methods of solving problems of statically determinate structures.

Subject: History of Architecture and Art I **2/0 cc 4 Cr**

Guarantor: Assoc.Prof. Ing. arch. Jarmila Húsenicová PhD.
Lecturers: Ing. arch. V. Šimkovičová, PhD.

Aim of the subject: History of world architecture and art from prehistory until the 13th century, Greek and Roman antiquity as the bases of European culture. A detailed study of selected significant monuments and works of art.

Subject: Thermal Engineering of Buildings **2/2 e 5 Cr**

Guarantor: Prof. Ing. I. Chmúrny, PhD.
Lecturers: Prof. Ing. I. Chmúrny, PhD., Ing. Rastislav Menďan, PhD.

Aim of the subject: The student will acquire knowledge about the basics of the design and assessment of building constructions from the viewpoint of heat propagation and transfer of a substance (moisture and air). He will acquire knowledge and will understand criteria for assessment of thermal properties of building structures, construction details, building spaces and buildings. He will acquire knowledge about principles of designing building structures from the viewpoint of the required state of indoor environment and satisfactory thermal balance in the winter and summer time of the year.

Subject: Typology I **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD.
Lecturers: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD., Ing. arch. Zuzana Nádašská, PhD.

Aim of the subject: The student will acquire knowledge and skills for utilising standards of typology for architectural design: functional-operational units and creation of a detailed locality for architectonic objects. The first part of the course is focused on domicile: family houses and residential buildings. The second part is devoted to buildings for transient lodging (boarding houses). The whole course is in preparation for independent and creative project work in the Design Studio course

Subject: Building Construction 2 **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Juraj Žilinský, PhD.
Lecturers: Assoc. Prof. Ing. Juraj Žilinský, PhD, Ing. Mária Gieciová, PhD

Aim of the subject: The student will acquire theoretical knowledge, the principles, methods and stages when designing a construction and subsequent material, and technological aspects of the design of elements and details of a bare construction. He will obtain knowledge in the field of waterproofing and soil- moisture protection of a substructure. He will also acquire information about the principles of the design of ceilings, suspended structures and structures for vertical transport. The student will be able to apply the accumulated knowledge obtained in the individual exercises to his architectural practice.

Subject: Theory of Elasticity **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Jozef Dický, PhD.
Lecturers: Assoc Prof. Ing. Jozef Dický, PhD. Assoc. Prof. Ing. Zora Mistríková, PhD.

Aim of the subject: The student will acquire theoretical knowledge regarding some elementary cases of the strength of the material in beams (tension or pressure, bending, torsion, buckling) as well as their combination. He will acquire methods of evaluating the strain and stress states in the cross section of a beam with the regard to both the linear and non-linear behaviors of materials.

Subject: Technical Equipment of Buildings 1 **2/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Jana Peráčková, PhD.
Lecturer: Assoc. Prof. Ing. Jana Peráčková, PhD.

Aim of the subject: The student will acquire knowledge about the field of sanitary technology in the following areas: water supplies in buildings, water supply connections, preparation of warm

water, sewage systems in buildings, sewage connections, gas distribution in houses, gas connections and the assembly of installations. The student will acquire knowledge and skills for the design of installation and the connection of buildings to public utility networks.

Subject: Information Technology **1 /2 cc 2 Cr**

Guarantor: Assoc. Prof. RNDr. Martin Knor, PhD
Lecturer: Ing. Hana Bašová

Aim of the subject: The student will acquire basic knowledge and skill in using AUTOCAD. AUTOCAD is by far the most widely used software in architectural practice in Slovakia.

Subject: Drawing and Composition I **0/2 cc 2 Cr**

Guarantor: , Ivan Řehák, sculptor
Lecturers: , Ivan Řehák, sculptor

Aim of the subject: The student will acquire the ability to develop conceptual thinking and aesthetic feelings; he will gain skills in working with creative means, in depicting objects, and in drawing and composition as means of interpretation. The student will acquire the ability to develop his graphic skills.

Subject: Building Construction 3 **2/2 e 4 Cr**

Guarantor: Prof. Ing. Jozef Oláh, PhD
Lecturers: Prof. Ing. Jozef Oláh, PhD, Ing. Erik Jakeš, PhD

Aim of the subject: The student will acquire knowledge in roofing construction, types of roofs and designing layers of a roof envelope with regard to physical characteristic and construction principles of the roof design.

Subject: Structural Mechanics **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Juraj Králik, PhD.
Zabezpečuje: Assoc. Prof. Ing. Juraj Králik, PhD., Assoc. Prof. Ing. Norbert Jendželovský, PhD.

Aim of the subject: The student will acquire basic knowledge in statics of statically indeterminate structures, he will learn about the force and deformation methods when designing statically indetermined framed structures.

Subject: Design Studio I. **0/3 cc 9 Cr**

Guarantor: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD.
Lecturers: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD., teachers from the Department of Architecture

Aim of the subject: The student will acquire skills in design, based on knowledge obtained in the Typology course and other theoretical and technical subjects. The result of the creative approach will be the student´s design of a family house. Design Studio I is focused on independent, creative work and conceptual thinking.

Subject: Technical Equipments of Buildings 2 **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Otília Lulkovičová, PhD.
Lecturer: Assoc. Prof. Ing. Otília Lulkovičová, PhD.

Aim of the subject: The student will acquire knowledge of the principles of the selection and design of central heating systems in buildings and their individual components in accordance with a program of the economical usage of fuels and energy consumption. The course focuses on heat sources – boilers, heat exchange stations and components of heating systems as well as their practical application in heating technology.

Subject: History of Architecture and Art II **2/0 e 2 Cr**

Guarantor: Assoc. Prof. Ing. arch. Jarmila Húsenicová, PhD.
Lecturer**:** Ing. arch. Vladimíra Šimkovičová, PhD.

Aim of the subject: History of world architecture and art from the Middle Ages until the beginning of the 20th century, study of styles and morphology, analysis of significant monuments and works of art, architecture and art in Slovakia.

Subject: Sociology **2/0 cc 2 Cr**

Guarantor: PhDr. Jozef Rybárik, PhD.
Lecturer: PhDr. Jozef Rybárik, PhD.

Aim of the subject: The student will acquire knowledge about sociology as a humane subject dealing with rules concerning the functioning and development of human society. The student will acquire knowledge about the basic issues of general sociology, with the aim of providing a basic orientation concerning complex social processes. Special attention is paid to the environmental context of the development of human society.

Subject: Foreign Languages – English, German **0/2cc 1Cr**

Guarantor: PhDr. Dagmar Špildová
Lecturers: Teachers from the Department of Languages

Aim of the subject: The student will acquire and improve his theoretical and practical knowledge of professional languages. He will acquaint himself with the composition of texts in professional publications; he will gain the ability to analyze a text and independently present a professional text. He will improve his language skills and ability to professionally communicate by listening to texts or presentations in the targeted language.

Subject: Economics and Building Industry Management **2/1e 3 Cr**

Guarantor: Assoc. Prof. Ing. Mária Zúbková, PhD
Lecturer: Ing. Zuzana Chodasová, PhD

Aim of the subject: The student will acquire basic knowledge about economic issues and the economics of running a business. The course focuses on the specific situation of a building enterprise in the market and explains the relations in the investment process and the basics of firm management. It provides information about the organizational and legal forms of an

enterprise, as well as the basic legal standards for a business. It explains the capacity, material and financial support of the functioning of a business with a practical example.

Subject: Reinforced Concrete Structural Members **3/2 e 5 Cr**

Guarantor: Assoc. Prof. Ing. Jaroslav Halvoník, PhD.
Lecturers: Assoc. Prof. Ing. Jaroslav Halvonik, PhD., Assoc. Prof. Ing. Štefan Gramblička, PhD

Aim of the subject: The student will acquire knowledge of problems in the design of reinforced concrete structures. He will learn about methods of the design of basic supporting members: beam slabs, staircases, columns, subjected to standard stresses. The design methods introduced include the design and verification of the dimensions of supporting members, calculation of load effects and internal forces, design and detailing up to graphic treatment - the layout of forms and reinforced drawings.

Subject: Building Construction 4 **2/2 e 4 Cr**

Guarantor: Prof. Ing. Anton Puškár, PhD
Lecturers: Prof. Ing. Anton Puškár, PhD. Ing. Boris Vavrovič, PhD

Aim of the subject: The student will acquire knowledge about the development and functional requirements for envelopes and openings and associated closing spaces. He will comprehend the relationship between envelopes and openings and associated closing parts. He will apply the knowledge gained with regard to theoretical and experimental analyses in structural layout, focused on energy saving and quality of interior environments.

Subject: Technology of Building Processes 1 **2/1 e 3 Cr**

Guarantor: Prof. Ing. Jozef Gašparík, PhD.
Lecturer: Prof. Ing. Jozef Gašparík, PhD

Aim of the subject: The student will acquire knowledge about the basic theoretical principles in the field of construction processes and the use of construction machines. The aim of the subject is to lead students towards a creative approach in the selection of optimal production processes and procedures. The lectures, as well as the seminars are oriented towards the technology of soil and rock digging processes, especially stressing the technology of digging and dumping (technological characteristics of rocks, optimal technologies, selection of machines for earth works, quality control, etc). During individual lectures the student will obtain information about the principles of safety and health protection at work, as well as environment protection.

Subject: Technical Equipment of Buildings 3 **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Marta Székyová, PhD
Lecturer: Assoc. Prof. Ing. Marta Székyová, PhD

Aim of the subject: The student will acquire knowledge and skills and learn the functional principles and design requirements for ventilation and air-conditioning systems in buildings. The student will gain an overview of ventilation and air-conditioning systems. The course emphasizes the creation of indoor environments and reducing energy demands.

Subject: Design Studio II. **0/3 cc 9 Cr**

Guarantor: Prof. Ing.arch.akad.arch. Miloslav Mudrončík
Lecturers: Assoc. Prof. Ing. arch. Jozef Liščák, PhD, Visit. Assoc Prof.Ing. arch. Peter Bauer, Ing. arch. Zuzana Nádaská, PhD., Assoc. Prof. Ing. Ivan Turček, PhD.

Aim of the subject: The student will acquire skills in conceptual, independent architectural design. He will integrate knowledge from lectures on theoretical and technical subjects and the Typology subject. Results of the creative approach will be the student's design of a residential building (all types). Design Studio II is focused on independent, creative work and conceptual thinking.

Subject: Composition and Colour in Architecture **2/0 cc 2 Cr**

Guarantor: Assoc. Prof. Štefan Bobota, painter
Lecturer: Ivan Řehák, sculptor

Aim of the subject: The student will acquire a basic knowledge of colour harmony and composition. The aim of the subject is the development of an aesthetic and intellectual appreciation of colour. The student will acquire a sense of colour relations, the mixing of colours, the terminology of colours and the use of colour in architecture when creating work or living space.

Subject: Costs and Prices in the Building Industry **2/1 e 3 Cr**

Guarantor: Assoc.Prof. Ing. Mária Zúbková, PhD.
Lecturers: Ing. Helena Ellingerová, PhD.
Ing. Branislav Púchovský, PhD.

Aim of the subject: The student will acquire theoretical and practical knowledge of the calculation of the costs and pricing of buildings and projects. He will understand the principles of the application of price regulations, the procedures of public procurement and price negotiations. He will learn to work with price estimates and the detailed calculation of the cost of structures and buildings.

Subject: Design Studio III. **0/4 cc 10 Cr**

Guarantor: Prof. Ing. Anton Puškár, PhD,
Lecturer: Ing. Alena Pernišová, PhD.

Aim of the subject: The student will acquired knowledge and skills in independent, conceptual thinking; he will obtain the ability to integrate information and to make accurate decisions in his architectural practice. The student will present his skills in a construction project of a family house developed in the Design Studio I.

Subject: Building Acoustic and Illumination **2/2 e 4 Cr**

Guarantor: Prof. Ing. Peter Tomašovič, PhD.
Lecturers: Prof. Ing. Peter Tomašovič, PhD., Ing. Dušan Dlhý, PhD., Ing. Viera Gašparovičová, PhD

Aim of the subject: The student will acquire knowledge in solving the correct placement of buildings, taking exterior noise into account. The student will acquire knowledge and skills in designing and assessing structure dividing interiors from the standpoint of sound insulation, knowledge about theoretical methods of calculating the assumed noise levels in exteriors and interiors of buildings, dimensioning external cladding of buildings in relation to the traffic noise, designing enclosed spaces from the standpoint of space acoustics, about methods of noise reduction in interiors and exteriors of buildings, about constructional anti-noise conditioning and noise studies. In addition, the problems of assessment of interior spaces from the viewpoint of illumination and insolation of buildings, methods of assessment and the design of proposed measures are included as well.

Subject: Reinforced Concrete Structural Systems **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Ivan Harvan, PhD.
Lecturers: Assoc. Prof. Ing. Ivan Harvan, PhD., Ing. Viktor Borzovič, PhD.
Aim of the subject: The student will acquire knowledge of the following topics: loads, structural design and reinforcement principles of frameworks, foundations, and slab constructions supported by jack shores or locally and wall constructions, check calculation of reinforced concrete slabs defection considering cracks and concrete creeping as well as the building methods of concrete bearing structures.

Subject: Typology II **2/1 e 3 Cr**

Guarantor: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD.
Lecturers: Assoc. Prof. Ing, arch. Jozef Liščák, PhD., Assoc. Prof. Ing. arch. Elena Dohňanská, PhD., Vis. Assoc. Prof. Ing. arch. Peter Bauer

Aim of the subject: The student will acquire knowledge and skills on the use of tools of the Typology subject in his future architectural practice. He will get information on functional brief of buildings, functional units and their relations. The layout methods are presented by the typology of buildings with transient lodgings and office buildings. The course is a preparation for independent and creative project work.

Subject: Steel and Timber Structures **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Ján Brodniansky, PhD.
Lecturers: Prof. Ing. Ivan Baláž, PhD., Assoc. Prof. Ing. Ján Brodniansky PhD., Assoc. Prof. Ing. Ferdinand Draškovič, PhD

Aim of the subject: The student will acquire basic knowledge about materials and principles of dimensioning elements and metal joints (steel and aluminum) and timber structures.

Subject: Internship **3 weeks c**

Guarantor: Assoc. Prof. Ing. Juraj Žilinský, PhD.
Lecturers: Assoc. Prof. Ing. Juraj Žilinský, PhD.Ing. Mária Gieciová, PhD.

Aim of the subject: The student will advance his ability with regard to the conceptual project of building structures during his practice in projection firm or building company. The aim is to prepare the student for Design Studio IV and his final bachelor ´s work.

Subject: Building Construction 5 **2/2 e 4 Cr**

Guarantor: Prof. Ing. Anton Puškár, PhD.
Lecturers: Prof. Ing. Anton Puškár, PhD., Ing. Dušan Dlhý, PhD.

Aim of the subject: The student will acquire knowledge of the field of chimneys, partitions, interior doors, gates, wall and floor surfaces and soffits as well as their physical characteristics and construction principles.

Subject: Technology of Building Processes 2 **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Peter Makýš, PhD.
Lecturers: Assoc. Prof. Ing. Peter Makýš, PhD., Assoc. Prof. Ing. Ivan Juríček PhD.,

Aim of the subject: The student will obtain knowledge about construction processes (the production of concrete and masonry and their assembly) used in the realization of load -bearing, external and other constructions of buildings, which assure their stability and define their dimensions. The instruction encourages a creative approach in the selection of optimal production methods and procedures.

Subject: Typology III **2/1 e 3 Cr**

Guarantor: Assoc.Prof. Ing. arch. Elena Dohňanská, PhD.
Lecturers: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD, Assoc. Prof. Ing. arch. Jozef Liščák, PhD.,

Aim of the subject: The student will acquire knowledge and skills using tools of the Typology subject in his future architectural practice. He will get information on functional brief of buildings, functional units and their relations. The layout method is presented by the typology of industrial, agricultural and transporting buildings. The course is a preparation for independent and creative conceptual project work.

Subject: Steel and Timber Structural Systems **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing. Ján Brodniansky, PhD.
Lecturers: Prof. Dr. Ing. Zoltán Agócs, PhD., Assoc. Prof. Ing. Ján Brodniansky, PhD., Assoc. Prof. Ing. Ferdinand Draškovič, PhD.

Aim of the subject: The student will acquire knowledge about the basic principles of the design of steel and timber load-bearing structures, as well as their execution, functioning and maintenance. Halls, multi-storey frame systems of high-rise buildings, layouts and basic structural members and bracing systems of buildings, fire-protection and anticorrosive protection are dealt with. Attention is paid to most utilized types of timber load -bearing systems and their construction.

Subject: Soil Mechanics and Foundations **2/2 e 4 Cr**

Guarantor: Prof. Ing. Jozef Hulla, PhD.,
Lecturers: Prof. Ing. Jozef Hulla PhD, Prof. Ing. Peter Turček, PhD.

Aim of the subject: The student will acquire knowledge about soil properties, stability and deformation tasks. He will understand the principles of spread and deep foundations on standard construction sites and will acquire practical experience in the improvement of foundation soil properties and interactions between constructions and their bedrocks. The student will understand above ground and underground drainage of building pits and geotechnical problems of high-rise buildings and underground structures.

Subject: Design Studio IV **0/4 cc 9 Cr**

Guarantor: Prof. Ing. Anton Puškár, PhD.
Lecturers: Prof. Ing. Anton Puškár, PhD., Ing.Terézia Miklósiová, PhD., and teachers from the Department of Building Structures

Aim of the subject: The student will acquire knowledge and skill in independent, conceptual thinking, he will obtain ability to integrate information and proper decision making in architectural practice. The student will present his skills in a construction project of a residential house developed in Design Studio II.

Subject: Urbanism 1 **2/1 cc 3 Cr**

Guarantor: Assoc. Prof. Ing. arch. Jarmila Húsenicová, PhD.
Lecturer: Assoc. Prof. Ing. arch. Jarmila Húsenicová, PhD.

Aim of the subject: The student will acquire knowledge about basic urban design, methods of town and country planning based on the national development programme via regional plans and master plans of municipalities and localities. He will be able to understand their relationship and consecutives as well as the importance of the transportation and technical infrastructure. The student will get information about a wide scale of specific types of town and country planning data and documentation.

Subject: Environmentalism **2/0 cc 2 Cr**

Guarantor: PhDr. Štefan Huszár
Lecturer: PhDr. Štefan Huszar

Aim of the subject: The student will acquire knowledge about the specific problems of the environment and their historical development, both in the local and global senses. He will understand the relationship of the natural environment and landscape and will acquire information about different types of landscapes. In this context the landscape and environment are perceived as an indivisible whole. The human activities in the environment and the responsibility for them form an important part of problems of waste and waste management in natural systems, which are exposed to anthropogenic pressures.

Subject: Fire Safety of Buildings **2/1 e 3 Cr**

Guarantor: Assoc. Prof. Ing. Imrich Mikolai, PhD.
Lecturers: Assoc. Prof. Ing. Imrich Mikolai, PhD., Ing. Juraj Olbřímek, PhD.

Aim of the subject: The student will acquire basic knowledge of the terminology and solutions to problems in the field of the fire safety of buildings. He will understand the mutual relationship of the spatial lay-out, choice of fire safety constructions and technical equipment of a building

with the conceptual solution of the fire safety of a building, in connection with the complexity of the building itself. He will acquire practical experience of the fire-security measures necessary for single family and residential houses.

Subject: Construction Law **2/0 cc 2 Cr**

Guarantor: JUDr. Ján Gajniak
Lecturer: JUDr. Ján Gajniak

Aim of the subject: The student will acquire knowledge about the legal measures of space planning and building permission proceedings and methods of acquiring building plots, as well as the decision-making process of the state administration, the result of which are approvals for the preparation and realization of building structures and their continuing utilization.

Subject: Renovation of Buildings and Preservation of Monuments **2/0 cc 2 Cr**

Guarantor: Prof. Ing. arch. Anton Puškár, PhD
Lecturers: Assoc. Prof. Ing. arch. Elena Dohňanská, PhD., Prof. Ing. arch. Anton Puškár, PhD.,

Aim of the subject: The student will acquire knowledge about principles of defects in buildings in general. The student will get information about international agreements and laws for the restoration and protection of monuments. Furthermore historic structures, their defects and methods of restoration according to their historic and monumental values are dealt with. The student will get acquainted with the valid universal principles for design in historical environment.

Subject: Bachelor´s Work **0/9 cc 14 Cr**

Guarantor: Prof. Ing. Anton Puškár, PhD.
Lecturers: Prof. Ing. Anton Puškár, PhD., Assoc.Prof. Ing. Elena Dohňanská, PhD., Ing.Terézia Miklósiová, PhD, and teachers from the Department of Architecture and the Department of Building Structures

Aim of the subject: The student will design buildings for transient lodging or office buildings.The student will present his knowledge, skills and ability in the design of structures, in analysing exacting constructions and details, in formulation of physical and technical analyses, conclusions and their application in a project.

Annotations of the Optional Subjects in Bachelor´s Degree Study in the Building Structures and Architecture (PSA) Study Programmme

Subject: Business Law **2/0 cc 2 Cr**

Guarantor: JUDr. Ján Gajniak
Lecturer: JUDr. Ján Gajniak

Aim of the subject: The student will acquire knowledge in the field of business law, the establishment of an enterprise and business and commercial relations. Knowledge about these subjects is the basic condition for success in the business world.

Subject: Macroeconomics **2/0 cc 2 Cr**

Guarantor: Ing. Katarína Heretíková, PhD.
Lecturer: Ing. Katarína Heretíková, PhD.

Aim of the subject: The student will acquire knowledge about the basic issues to be encountered in the macro-economic sector. Economic policy is the complex of goals, instruments and measurements of the state which regulate economic life. The aim of society is to reach a high living standard, low rate of unemployment, fair prices and stability in the currency exchange.

Subject: Drawing and Modelling **2/0 2 Cr**

Guarantor: Assoc. Prof. Štefan Bobota, painter
Lecturers: Assoc. Prof. Štefan Bobota, painter, Ivan Řehák, sculptor

Aim of the subject: The student will acquire aesthetic spatial plastic feeling, skills in dealing with means of expression, depicting things, objects, ideas, thoughts, depicting human figures (according to plaster casts) in colour and form of styling.

Subject: Ethics for Architects and Civil Engineers **2/0 cc 2 Cr**

Guarantor: Ing. Katarína Heretíková, PhD
Lecturer: Ing. Katarína Heretíková, PhD.

Aim of the subject: The student will acquire knowledge about the basic theories of morality, ethical behavior, ethics of engineering practice and business ethics. He will also receive information about traditional genesis, functioning and tasks of ethical and moral values in society, especially market mechanism.

Subject: Typology IV **2/0 cc 2 Cr**

Guarantor: Assoc.Prof. Ing. arch. Elena Dohňanská, PhD
Lecturers: Assoc. Prof. Ing. arch. Jozef Liščák, PhD. Vis. Assoc. Prof. Ing. arch Peter Bauer

Aim of the subject: The student will acquire knowledge about typology of buildings for transient lodging, office buildings, catering facilities, warehouses and commmercial buildings. The student will get information about their functional brief, functional units and their relation to the layout. The course is a preparation for independent and creative conceptual project work.

Subject: Political Science **2/0 cc 2 Cr**

Guarantor: PhDr. Jozef Rybárik PhD.
Lecturer: PhDr. Jozef Rybárik PhD.

Aim of the subject: The student will acquire basic knowledge about political principles of development of the society, as well as the problems of politics and environment.

Subject: Construction of Facilities and Structures **2/2 e 4 Cr**

Garantor: Prof. Ing. Jozef Gašparík, PhD.

Lecturer: Prof. Ing. Jozef Gašparík, PhD.

Aim of the subject: The student will obtain knowledge about the process of the preparation of construction from the point of view of investors, as well as builders. The subject focuses on construction processes, their spatial, time and technological structures, the organization of production processes and proposed construction methods. The course helps to form the ability of students to work in the field of the preparation and managment of construction, designing methods of building construction, organisation of the time schedules, of constructions and ensuring the quality, health and safety protection, as well as environment protection in the process of the preparation and realization of buildings.

Subject: Concrete Structures **2/2 e 4 Cr**

Guarantor: Assoc. Prof. Ing.Ivan Harvan, PhD.,
Lecturers: Assoc. Prof. Ing.Ivan Harvan, Ing.Iyad Abrahoim, PhD.,

Aim of the subject: The student will acquire knowledge of the following topics: load-bearing systems of high-rise and large span concrete buildings, the effects of wind loads and earthquakes on high-rise buildings, transfer of a load through the supporting structure into the subsoil, general laying out of the tie walls and hubs in a building's floor plan, their design and reinforcement, structural possibilities of the concrete structure's span increasing.