

Program of Architecture

Structure, Contents, Learning Outcomes

Bachelor's educational program in Architecture covers 240 ECTS credits, including 135 credits obligatory components, 35 credits elective components. Student is eligible to take up to 70 credits for free credits /minor program.

Title of the Course	ECTS	Course Description
Obligatory component	135	Students should cover all obligatory courses
Academic Writing	5	The purpose of the Academic Writing course is to introduce students to the importance of writing in the university work and develop their critical reading and thinking, argumentative writing, library research, and documentation of sources in an academic setting so that they can successfully participate in that work. In order to write well in their academic and professional lives, students need to consider the question: What is academic writing? This course is designed to allow learners to explore and study existing texts and the processes of constructing written communication in various academic contexts. Students will acquire special academic vocabulary. Learners will do planning, drafting and revising activities that lead to successful writing. To understand more closely the principles and practices of process oriented, reader based academic writing, students will read, analyze, discuss, and respond to articles written by their peers and by published writers in coursework, journals, textbooks, and other published print and electronic texts.
Information Technology	5	Teach students computer technologies and Microsoft Office Programs, so they can fulfill various tasks, data analysis, present projects or results according to standards of presentations.
Mathematics	5	One of the goals of the course is to show to students that Calculus is crowning achievement of 17-th century of mathematics coming from Newton and Leibnitz having a considerable impact on the science even nowadays. We aim to develop the student's understanding of the basic concepts of Differential Calculus from theory and real world problems with an emphasis on engineering applications. We aim to explain students how to pass from understanding of constant quantities to variable and limiting processes; to clarify the definitions of derivative and differential as rate of change and a tool of linear approximation respectively; to teach the basic concepts of integral calculus, differential

		<p>and integral calculus of functions of several variables.</p> <p>One of our goals is to develop calculation skills to follow logical arguments and habit of independent thought.</p> <p>The course focuses on application aspects of differential calculus in geometry, physics, business and social sciences.</p> <p>The following topics will be covered: sets, Functions, models and graphs, limits and continuity, derivatives and differentials, curve sketching, extremum problems, indefinite and definite integrals of functions of one variable, applications in geometry, physics and engineering; differentials and elements of integral calculus of functions of several variables and their applications.</p>
Basic Design I	5	<p>The purpose of the course is to develop students' knowledge in visual and graphical analyses and evaluation of forms, colors and other characteristics of architectural objects.</p> <p>The course includes detailed explanation of basic design elements and principles.</p>
Architectural Drawing I	5	<p>The course aims to develop students' knowledge based on the graphical and visual representation of the project documentation and the international standards of performance. The course includes detailed explanation of basic design elements and principles.</p>
Architectural Drawing II	5	<p>The course aims to develop students' knowledge based on the graphical and visual representation of the project documentation and the international standards of performance. The course includes detailed explanation of basic design elements and principles.</p>
Materials and Structure	5	<p>The objective of the course is to make student familiar with the properties of natural and anthropogenic building materials and their respective performance attributes with an emphasis on their architectural expressiveness potential during the design practice; To provide students with the basic initial knowledge concerning requirements of architectural assemblies; Understanding of design and construction process; The structural principles and construction techniques for their assembly; The relationship between material, construction and design intention; To prepare the basics for deepening of the knowledge in the field of advanced structures and technologies and applying the gained experience in a practice.</p>

Architecture and Art Through the Ages (till 19th century)	5	The course offers fundamental studying of international history of Architecture and Art (related with architecture) from Megalithic culture, to the beginnings of the 19th century.
Architectural Physics and Building Technologies	5	The objective of the course is to explore to the students the principles, theories and recent research findings in the field of Building Technologies and Architectural Physics to create buildings that contribute to a more humane and environmentally responsible built world.
Professional English	5	The course aims at studying English language for specific purposes and acquisition of appropriate vocabulary in the field of architecture. In the process of mastering the professional language, course provides development of 4 basic language skill competences as: Listening, reading, writing, speaking; The course also includes mastering relevant vocabulary of professional language at B2 level.
Architectural Project I	10	The aim of the course is to teach students how to make an architectural project. This course is designed to acquire basic knowledge and develop practical skills in architectural design from very simple functional-planning schemes up to a planning decision of an individual house design.
Computer Aided Design I	5	Course gives the basic understanding of computer aided design and drafting in 3D
Architectural Project II	10	The course is second step of architectural project, which implies design of more difficult version of architectural-compositional and functional-planning scheme. The function of two-story object is café, with maximum square 250 m ² .
Modernism in Art and Architecture	5	The course offers an introduction to a history of modern architecture, origins and development stages from the end of the XIX century through the XX century, the main tendencies of the contemporary architecture and creation of individual architects, main architectural groups and schools theories and practice as well. Thus, the aim of the course is to give the students the opportunity to appropriate basic skills of the modern architecture roots and be ready for getting knowledge of the newest XXI century tendencies in architecture history and theory on the next stage of study.
Basics of International Building Code	5	The International building code is a basic part of architectural design. This course introduces students to building safety, fire prevention. The codes and standards are used to construct

		residential and commercial buildings, including homes and schools. The course will answer many important questions about conditions of existing projects and will improve quality of new architectural decisions.
Architectural Project III	10	The course is a third step of architectural project, which implies educational component in architectural-compositional and functional-planning scheme. The function of the building is a school.
Health and Safety	5	The main purpose of course is to provide students with a body of knowledge that will enable them to: <ul style="list-style-type: none"> ➢ understand and apply health and safety methodologies in the working environment; ➢ to make a positive contribution to health and safety at work; ➢ to make appropriate use of practice and principles to produce solutions to health and safety issues; to increase and enhance employment opportunities within the health and safety industry.
Architectural Project IV	10	The course is a forth step of architectural project and its aim is to acquire basic knowledge and develop practical skills in multistory residential building architectural project.
Internship	5	The course aims to enrich obtained theoretical knowledge with practical skills and understand practical application of theoretical knowledge gained at the university. Students will observe the performance of a mentor at the organization, in addition they will be able to do some tasks independently (under the supervision of a mentor) at the organization. Students will get acquainted with the structure and characteristics of the sector, basic directions of practical activities. Thus, the aim of the course is not only developing some practical skills of students, but to help them get used to and be integrated into real working environment.
Architectural Project V	10	The course is a fifth step of architectural project and its aim is to acquire basic knowledge and develop practical skills in contemporary art museum and shopping mall architectural project.
Bachelor Thesis	10	The aim of the bachelor thesis (architectural project) is to acquire students research skills equal to bachelor level; They will be able: <ul style="list-style-type: none"> - To search necessary literature and analize it; - To make a syntheses and comparison of researched materials; - To study the history and modern condition of research issue;

		To create an architectural project, which will include modern planning, structural and sustainable development principles; renewable energy sources and energyefficient construction-decorational materials.
Elective component	35	Students should cover 15 credits from language and minimum amount 20 credits from elective courses
Architectural Graphics	5	This course is designed to acquire basic knowledge and develop practical skills in architectural graphics.
Basic Design II	5	The purpose of the course is to deepen students knowledge of the basic design principles and ability of making spatial-structural analisys of projecting object. The course provides students with an ability of making connection between basic design and building function and analysing it.
Architecture Today	5	The course offers an introduction to a newest contemporary architecture, conceptions and movements, diversity and globalization of architecture and originality of the modern architects' creation since the end of the 20th century to nowadays. The aim of course is to fill the students' knowledge of the history of architecture perfectly, give them the basic skills in this field and thus make them to be ready for the next stage of study (Master's degree).
Computer Aided Design II	5	1. Creation of visualization of artistic design of architecture elements (exterior & interior). 2. Creation of environmental landscape for the architecture elements. 3. Video visualization a resulting composition. 4. Animation & inclusion of the characters into the composition in the shape of video, animations and material for presentations.
Advanced structures	5	The objective of the course is to make student familiar with advanced structures, exterior envelopes and contemporary production technologies. It continues the exploration of structural elements and systems, and expands to include more complex, long-span and high-rise systems. It covers topics such as reinforced concrete, steel and engineered wood design, and provides an introduction to tensile systems. Lectures also address the contemporary exterior envelope with an emphasis on their performance attributes and advanced manufacturing technologies.

Basics Urban Planning	5	This course is designed to develop students' knowledge for basic urban design skills. Assignment: "small urban neighborhood"
Foreign Languages	15	(Russian, Turkish, German, Spanish, French)
Building Science	5	The course aims to develop students' knowledge with specific informations in relation to the functions of different building types, based on which they will be aware of the need to deepen this knowledge. The course includes a general overview of various functional buildings.
Basics of Interior Design	5	Aim of the course is to introduce bachelor students to the basic theoretical and practical principles of interior design.
Environmental Design	5	Aim of the course is to introduce bachelor students to the basic theoretical and practical principles of environmental design.
Basics of Sustainable Architecture	5	The objective of the course is to give to bachelor of architecture the knowledge of basics of sustainable development during the practical professional activities and who will be able to continue studies on the Master program.
Sociology	5	On the completion of the course the students should have a general knowledge of the social world. The aims of the course are: - to provide students with a systematic introduction to the study of human behaviour; -to help students in understanding the functions of their own society and other cultures better. -to help students in identifying a diversity of behavioural problems ranging from global to local dimensions. -to help students in understanding and analysing major problems facing contemporary society involving sociological theory and research. -to relate the results of the sociological analysis to concerns of local communities. To research and evaluate potential solutions to behavioural problems
Principles of Management	5	The purpose of the course is to provide the students with the understanding of main management principles, functions of managers and the factors that influence the process of management externally and internally; The course provides the environment of business and management challenges that are created by the ever-changing market demands and the activities in the course will help develop and apply problem-solving and decision-making skills for the students.

		<p>These will enable them to be effective and efficient managers;</p> <p>Course will provide the emphasis on interdependence of the three characteristics common to all organizations: Behavior (of individuals or groups), Structure (design of fixed relationships among organizational jobs), and Processes (communication, decision-making, planning, controlling, motivating and socialization).</p>
Future Street in Urban Context	5	The course aims to develop the knowledge base of road infrastructure design. The course covers detailed explanations of modern road network design elements and deals with such important issues as motor movement and safety, environmental impacts, economic benefits, spatial formation, public health and the quality of living environment in general.
Free Components/Minor	70	Student can choose any Minor Program (30-60 ECTS) throughout the university or any courses 70 ECTS as free credits

Learning Outcomes

The graduate has:

- Comprehensive knowledge of architectural planning and design;
- The Understanding of the role of the architectural profession;
- The knowledge of architectural terminology;
- The knowledge of architectural styles and famous architects' works;
- The knowledge of CAD (computer-aided design) software programs.
- The knowledge of basics of international building regulations;
- The knowledge of basics of principles, theories and methods of sustainable architecture;
- The knowledge of principles, theories and recent research findings in the field of Building Technologies and Architectural Physics;
- The knowledge of contemporary building structures and enclosing skin, as the fundamental elements of architecture;
- The knowledge of basic urban planning principles.
- The ability to use field-specific terminology in the working process, while presenting, discussing or making architectural project;

- The ability to use all the above mentioned skills and knowledge properly while employing in different private or public institutions;
- The ability to identify architectural characteristics of building including planning principles, functional schemes and urban context of site area;
- The ability to use the knowledge of basics of global experience in sustainable architecture during the professional architectural practice;
- The ability to use knowledge of architectural physics in practice;
- The ability to work individually and in teams to analyze problems, do research activities and develop appropriate solutions to those problems.
- The ability to provide a proactive evaluation and assessment of his/her own learning process, the ability to plan one's learning logically and the ability to identify future learning objectives;
- The ability to work with architectural course books and scholarly literature independently, the ability to enhance his/her own knowledge through it;
- The ability to plan continuous professional development in accordance with one's own aims and objectives;
- Interest in the issues related to architecture and desire to continue and enhance knowledge;
- The ability to identify personal capacity and the ability to develop professionally further with the use of existing resources and capacities.

Evaluation System

The maximum assessment point of each course is 100. The passing grade for awarding credits is 51 points and this grade shall consist of the points of the midterm evaluation(s) and the points of the final assessment. The student should pass the minimal competence level set for midterm evaluation and final assessment. The minimal competence level of the midterm/final evaluation is defined by syllabi.

The grading system shall allow:

a) Five positive grades:

- (A) Excellent –91-100 points;
- (B) Very good –81-90 points of maximum grade;
- (C) Good – 71-80 points of maximum grade;
- (D) Satisfactory – 61-70 points of maximum grade;

(E) Acceptable –51-60 points of maximum grade;

b) Two types of negative grades:

(FX) Fail – 41-50 points of maximum grade, meaning that a student requires some more work before passing and is given a chance to sit an additional examination after independent work;

(F) Fail –40 points and less of maximum grade, meaning that the work of a student is not acceptable and he/she has to study the subject anew.

The final grade is composed of the summation of midterm evaluation(s) and the final evaluation.