COURSE DESCRIPTIONS

Modeling

Academic year: first
Semester: 1+2
Number of credits: 2
Objectives:
Recognizing the importance of the preparation of spatial patterns as part of the architectural design; Introducing with the different type of models and their role in the various stages of architectural design; Introduction to the characteristics of different materials for making architectural models; Introduction to the process of reduction of architectural elements in making the model the aim of highlighting the fundamental nature of the architectural object; Introduction to the standard as an element that determines access in developing the model.

Design Studio 1

Academic year: first
Semester: 1
Number of credits: 8
Objectives:
Setting disciplinary grounds for critical viewing and conceptual thinking of phenomenology of architectural space, develop the capacity for a performance of complete, integrated architectural design, develop feelings of personal intentionality in making architectural decisions.

Architectural Design 1

Academic year: first
Semester: 1+2
Number of credits: 8
Objectives:
The purpose of this course is to introduce the students with the methodology of design, as well as introduction, or learning of the basic concepts, principles of architecture and architectural space, measures and proportions in architecture, architectural design, organization and shaping of the space for a particular function; study of architectural elements, furniture and equipment, the space required for their use and defining certain functions and spaces within residential buildings. The program includes an introduction to the basic structural systems, materials and qualification for architectural drawings, foundations, sections and layouts in the context of the formation of the project from idea to conceptual solution of an architectural project.

Architectural Structures 1

Academic year: first
Semester: 1+2
Number of credits: 8
Objectives:
Introduction and study of the methods of the architectural constructions, the building tradition, common structural systems, vertical structural elements - concepts, purpose and constructive role in the constructive system; non-structural architectural elements - concepts, purpose, function and proper materialization; connections, application and preparation; all this with an emphasized incorporation of building materials, horizontal structural elements - concepts, types, functions, structure; foundations - concepts, types, function; setting vertical chimneys and ventilation ducts as a specific problem in architectural structures; floors and ceilings as an important matter in the production and building of the space.

Principles of static

Academic year: first
Semester: 1
Number of credits: 3
Objectives:
Introduction to basic items of the statistics principles as a weapon of understanding the elementary constructive systems. There is also a basic analytic and practical introduction of the principles and physical concepts of the statistics. After successfully attending of the subject the student acquires the basic knowledge about the strengths, analysis and statistics calculation of simple and complex planar beams as elements of constructive systems.

Art Studio – Drawing

Academic year: first
Semester: 1+2
Number of credits: 2
Objectives:
The concept of the subject program is to develop an artistic expression and visual perception of space as a necessary phenomenon in the process of creating a space, spatial relationships and volumes for future architects. Therefore, the main objective of the course by learning the various techniques of drawing and composing is to train the students to express themselves through the character, shape and form, for example, to articulate themselves graphically, or simply to learn the skill of drawing and composition.

Geo Information Systems

Academic year: first
Semester: 1
Number of credits: 2
Objectives:
The subject locates priority aims in understanding the meaning and freely using of geodetic and cadastral plans, blueprints, topographical maps and other graphic products which are basic in planning and spatial arrangement/development. In this context and following the automation in spatial planning in priority intentions, approaches for converting conventional 2D and 3D documentation in forms compatible with GeoIS and CAD technology will be implemented as well as the preparation and manipulation of vector spatial forms.

Descriptive geometry

Academic year: first
Semester: 1+2
Number of credits: 8
Objectives:
As a basic discipline the Descriptive geometry has the main objective to develop students' ability to perceive the spatial three-dimensional forms and their mutual relations and their representation of two-dimensional drawing, according to the international standards of the universal language of technical drawing. On the other hand, this discipline allows a clear presentation of their own ideas for the organization of spatial forms by creating their own technical drawing as a basic assumption of the existence of any engineering discipline.

Mathematics

Academic year: first
Semester: 1+2
Number of credits: 6
Objectives:
The purpose of the subject is the student to provide basic knowledge of some Mathematical concepts, among which are the differential and integral calculation, without which many modern architectural buildings could not be realized. The other purpose is introducing the students with the aesthetic values of Mathematics and the mathematical - philosophical significance of the idea of symmetry. The student will get familiar with the development of mathematical thought and its contribution and importance to modern society.

Design Studio 2

Academic year: first
Semester: 2
Number of credits: 8
Objectives:
Setting disciplinary grounds for critical viewing and conceptual thinking of the phenomenology of architectural space, develop the capacity for gaining a skill for visualizing the complete, integrated architectural design, develop feelings of personal intentionality in making architectural decisions.

Strength of Materials

Academic year: first
Semester: 2
Number of credits: 3
Objectives:
Introduction of basic concepts of the materials strength. Analysis of the conditions of intensions and deformations. Dimensioning of constructive elements with elementary cross sections. A short introduction of statistical indefinite beams. As well as the subject Principles of statistic the student acquires the basic knowledge about the preliminary determination of the cross sections dimensions of the beams elements of the constructive systems.

Introduction into Computer Aided Design (CAD/CAAD)

Academic year: first
Semester: 2
Number of credits: 2
Objectives:
The course objective is for students of the Faculty of Architecture to be prepared for using computers in their daily work. So that each student individually and creatively be able to use computers it is necessary to learn about handling computational engine and its peripherals in the system as well as program support-oriented graphical expression. Students will become familiar with: the main components of the computing machines, basic principles for the manner of their work with the program basis for systematic management computers (operating system), programs for production and processing of text, scanning graphic images as well with programming packages that enable combining text and images. In the case in the base will also include elements of programming. The goal is for students to gain basic knowledge about the process of programming in programming languages that are used in the preparation of packages for computer graphic communication.
The study and application of the latest versions of CAD program packages (AutoCAD and ArchiCAD), the student will prepare a full two-dimensional representation of a given architectural structure.

Design Studio 3

Academic year: second
Semester: 3
Number of credits: 8
Objectives:
Architectural Studio 3 is written in the continuity of the architectural study of 1 and 2 of the first year and represents a stage of preparation for subsequent cycles of thematic learning architecture. Domains of learning space are identical to those of the first year: arrangements of observation, understanding and analysis of architectural space; Procedure of imagination the knowledge of the constituent elements and context of architectural design; Elements of theory and doctrine of architectural design, architectural history and culture; Familiarization and training the means of representation of architectural space.

Architectural Design 2

Academic year: second
Semester: 3+4
Number of credits: 6
Objectives:
Understanding of the project process as an intellectual processes/sequence of logical actions (from idea to realization). Students will gain fundamental knowledge and instruments to design and to experiment the procedures of outlining the architectural design. Project activities should encourage the imagination of the student, both in the definition and organization of thinking about the area and also in finding methods.

Architectural Structures 2

Academic year: second
Semester: 3+4
Number of credits: 8
Objectives:
Introducing the students with the principles and methods of analysis of certain architectural issues pointed out in the thematic sphere of the subject through designed architectural detail, with special emphasis to its knowledge in the design and development process of architectural projects (level of presentation in basic architectural project and performance project).

Theory of structures

Academic year: second
Semester: 3
Number of credits: 3
Objectives:
Understanding of the concepts: mathematical (accounting) model of constructive system and methods for analysis of structures to static and dynamic loads (seismic concept). Using of an application software for structural analysis.

Urban Planning 1

Academic year: second
Semester: 3+4
Number of credits: 8
Objectives:
Acquiring basic knowledge of the system of urban planning and the context in which it is implemented; Study of the concept – urbanism, urban planning and it is occurrence throughout the world. Study of the first city, and the city throughout history, its development, it's comprising, types of cities.

History architecture and art 1

Academic year: second
Semester: 3
Number of credits: 2
Objectives:
Qualification of students to take active knowledge or analytical and constructive approach and attitude towards the construction (architectural, urban) and artistic heritage, not passive factual and chronological knowledge. Training of the ability for progressive recognition, selecting and evaluating the facts of permanent and variable categories and meanings in architectural concepts in synchronic and diachronic direction. Training for accepting the messages from the historical heritage as an important factor in building a personal constructive language and culture.

Art Studio-Plastic Forms

Academic year: second
Semester: 3+4
Number of credits: 4
Objectives:
Further development of the future architects' power of visualization and perception of space as a necessary phenomenon in the process of creating a space through the aspect of form and color. As well as dealing with articulation of the student's personal expression, the subject aims to encourage and develop the ability for conceptual thinking and articulation of the idea. In order to have an idea for a particular space and to imagine space in general, it is necessary to encourage and develop the visual way of thinking.

Computer Aided Design (CAD/CAAD)

Academic year: second
Semester: 4
Number of credits: 3
Objectives:
Creating basics for using computers in the students' work. In order to enable each student individually and creatively to use a computer it is necessary the student to be familiar with a computer support oriented to graphic design and expression (CAD). The goal is students to gain knowledge of spatial architectural computer aided design (CAD/CAAD) and other computer graphic communication.

Photography

Academic year: second
Semester: 4
Number of credits: 1
Objectives:
The subject aims through lectures and practical work to introduce the students with the photography medium and to enable them to independently use the photography in order to achieve their objectives.

Design Studio 4

Academic year: second
Semester: 4
Number of credits: 8
Objectives:
Architectural Studio 4 is written in the continuity of Architectural Studio 3 and represents the last stage of preparation for subsequent cycles of thematic learning architecture. The main objective of the course is to train students to analyze the architecture and diagrammatic to present observable characteristics of a particular place - the subject of research interest; understand, and learn to apply the various stages of the creative thinking process of an architectural project; to enable students to analyze a program, from which later should develop clear architectural concept (hypothesis); demonstrate an understanding of how the design of architectural form and space are directly associated with psychological, physiological, sociological and cultural needs of the people; learn different research techniques to their own design strategies (through sketching, diagramming and manufacture of analog and digital study models - two-dimensional, three-dimensional); learn to prepare different forms of presentation drawings and models through which will present its final project, complete with clear voice narration.

Wooden structures

Academic year: second
Semester: 4
Number of credits: 3
Objectives:
The student should acquire knowledge of theoretical and practical methods for calculation of wooden constructions, in order to choose and design constructive systems of architecture objects independently.

History of architecture and art 2

Academic year: second
Semester: 4
Number of credits: 2
Objectives:
Qualification of students to take active knowledge or analytical and constructive approach and attitude towards the construction (architectural, urban) and artistic heritage, not passive factual and chronological knowledge. Training of the ability for progressive recognition, selecting and evaluating the facts of permanent and variable categories and meanings in architectural concepts in synchronic and diachronic direction. Training for accepting the messages from the historical heritage as an important factor in building a personal constructive language and culture. Continuing forward with the program introduced in History of architecture and art 1.

3D Modeling

Academic year: second
Semester: 4
Number of credits: 3
Objectives:
Using computers in the students' work. For using the computers individually and creatively in designing the facilities, the student should gain knowledge about computer support oriented to graphic design and expression. The goal is after acquiring knowledge about spatial architectural computer aided design (CAD/CAAD) and other computer graphic communication, the student to be able to access a three-dimensional modeling and design.

Video and multimedia presentation

Academic year: second
Semester: 4
Number of credits: 1
Objectives:
The subject has a primary task of the architecture students to bring forward the creative potential of the video as a medium. Video art as one of the newer branches of art works of several interdisciplinary levels which are particularly interesting for every visually oriented artist who seeks to expand the notion of perception. As a medium which is defined as a "media time", the video is inevitably determined by the temporal-spatial category in any of its many manifestations.
The use of video for an architect is a challenge to de-focus for some time from your primary area of interest, which will result in new sensations and insights, which in turn will act reversible to his main profession. Different media are just different aspects of the same reality, media plurality in the expression are a multitude of possibilities for understanding the phenomena of time and space - despite their maximum physical relativity, powerful determinants of our psycho-physical existence; their re-defining and re-contextualizing is one way of transcending them in the areas of time and space, which is the ultimate goal of each person.

Practice 1

Academic year: second
Semester: 4
Number of credits: 2
Objectives:
The purpose of Practice 1 is the students to spend ten working days in a registered design company-office and get acquainted with the functioning of the company, the legal provisions under which a company operates and introduction to the ways and methods of implementation (developing) of project documentation in accordance with the Law on construction of the Republic of Macedonia.

Design Studio 5

Academic year: third
Semester: 5
Number of credits: 8
Objectives:
Designing of residential buildings or buildings for collective housing according to the standards and regulations for designing the type of constructive objects which were the subject matter of the subject Architectural design 3.

Architectural Design 3

Academic year: third
Semester: 5+6
Number of credits: 4
Objectives:
Raising an awareness and understanding of the complexity of individual housing as a phenomenon and as a component of apartment housing. Showing special interest and sensitivity to the existential space as a medium of human existence. Acquiring fundamental knowledge about patterns of individual housing and housing typology. Learning the basic principles of designing residential buildings according to the low, medium and high-residential structure.

Architectural Design 4

Academic year: third
Semester: 4+6
Number of credits: 4
Objectives:
The teaching in the fifth semester provides the students with the knowledge necessary for professional solving of design tasks in administrative (office) buildings and culture and education buildings and qualifies the students to prepare design documentation for practical implementation.

Architectural Structures 3

Academic year: third
Semester: 5+6
Number of credits: 6
Objectives:
The course objective is to introduce and train the student to use the advanced types of structural systems through the study of the principles and elements of structural systems, the process of their genesis, materials for their performance, the manner and meaning of their applied architecture, using modern and advanced building technologies in architecture through the study of the principles and elements of the processes of construction, materials and technologies for their performance.

Physics in Architecture

Academic year: third
Semester: 5
Number of credits: 3
Objectives:
Identify priority targets in understanding the theoretical underpinnings and practical methods for the formation of architecture under the influence of light, color, heat, air movement and sound. In this context, the introduction and use of standards, and practical, relevant physical methods and techniques to enable students obtain numerical values for assessing the optimal characteristics of the projects and facilities in several key criteria: comfort, reliability and longevity, energy and economic efficiency. Obtained knowledge of the principles and methods of analysis of certain architectural issues raised in the thematic areas of the course will equip the students to successfully implement it in the design and construction of facilities.

Urban Planning 2

Academic year: third
Semester: 5+6
Number of credits: 8
Objectives:
Acquiring basic knowledge about the system of urban planning and the context in which it is realized; Introduction to the methods and techniques of urban analysis, urban planning and programming; Acquiring basic knowledge about the types of urban plans and their content.

History of architecture and art 3

Academic year: third
Semester: 5
Number of credits: 2
Objectives:
Acquiring of the necessary knowledge about the various concepts of the history of art and architecture in correlation with socio-economic relations of the particular period in the development of the civilization, as well as studying the characteristics of different stylistic periods through the most famous works of art of the most important masters of the corresponding period. The acquired knowledge is put into function of proper evaluation of architectural heritage and drawing the moral in creating new values.

Management and organization of building investment

Academic year: third
Semester: 5+6
Number of credits: 6
Objectives:
Management and organization of the construction, building, introducing the basic principles and methods. Study of the types of construction and what are they consisted of by visiting the building sites. Application of knowledge learned through practice.

Steel Structures

Academic year: third
Semester: 5
Number of credits: 2
Objectives:
The student learns the theoretical and practical methods for calculation of steel constructions in order to be able to select and design the construct systems of architecture objects.

English

Academic year: third
Semester: 5
Number of credits: 1
Objectives:
The purpose of the subject is to enable students to actively use the appropriate professional English, while improving the four skills: reading, writing, listening and speaking.

Architectural Studio 6

Academic year: third
Semester: 6
Number of credits: 8
Objectives:
Acquiring knowledge on specific aspects, design methods and tools and their application in the design of buildings in the area of the culture.

Installations in architecture

Academic year: third
Semester: 6
Number of credits: 3
Objectives:
The priority targets are located in the importance of using the installations with the allocation of knowledge in the sphere of water and sanitation, heating and ventilation and electrical installations. The objectives of the curriculum are introduction and training of students to the principles and methods of analysis of certain architectural issues raised in the thematic areas for the practical use of relevant scientific methods and techniques for planning, design, and proper placement of installations in buildings.

History of architecture and art 4

Academic year: third
Semester: 6
Number of credits: 2
Objectives:
Acquiring of the necessary knowledge about the various concepts of the history of art and architecture in correlation with socio-economic relations of the particular period in the development of the civilization, as well as studying the characteristics of different stylistic periods through the most famous works of art of the most important masters of the modern architecture. The acquired knowledge is put into function of proper evaluation of architectural heritage and drawing the moral in creating new values.

Concrete and reinforced concrete structures

Academic year: third
Semester: 6
Number of credits: 2
Objectives:
Students learn the basic characteristics of concrete and reinforced concrete structures and the opportunities they provide. They also learn the way of designing and calculating of commonly applied elements and sections for various types of impacts (intersecting forces).

Aesthetics

Academic year: third
Semester: 6
Number of credits: 1
Objectives:
The purpose of teaching Aesthetics of Architecture is the students to learn about the basics of aesthetic ideas as a philosophical science discipline, by aesthetic relationship to the world and aesthetic views about creation, about art and aesthetic categories, as well as their importance to the construction of human and artistic worldview. Identification of the main theoretical approaches and methods of aesthetics in the development of aesthetic issues, students will deepen their knowledge of the importance of creativity and aesthetic categories for human life and
for the maintenance and advancement of humanity. This course will take them into the great aesthetic values and forms of creativity will introduce the basic thoughts in human history for aesthetic values and purpose of creation, especially architectural and various types of visual art, will present the latest research and creative endeavors in art and a construction plan, and elements of ethics of profession building done as a special type of culture.

Practice 2

Academic year: third
Semester: 6
Number of credits: 2
Objectives:
The aim of the Practice 2, the students to spend ten working days in a registered construction company and get acquainted with the legal provisions under which a company operates, the functioning of the site, to have insight into certain parts of the design building, processes and procedures for the implementation of the phases of construction and building in accordance with the Law on construction of the Republic of Macedonia.

Interior Design 1

Academic year: fourth
Semester: 7+8
Number of credits: 8
Objectives:
Introducing students to the discipline interior architecture:
1. Chronological development of different concepts of designing the internal architectural spaces (7 sem).
2. The basic nature of the internal architectural space that relates with the model as a basic inspiration (8 sem).

Architectural Composition

Academic year: fourth
Semester: 7
Number of credits: 3
Objectives:
Introducing with the nature of architectural space and the principles of composition resulting from it. Their concrete application as ontological approximations.

Perspective

Academic year: fourth
Semester: 7
Number of credits: 3
Objectives:
Introduction, history of perspective, elements of point perspective, plane, geometric bodies. Drawing a perspective with a direct stich method, with a downgrade method, with a simplified contour method and using the coordinate system method.