

Faculty of Architecture, Brno University of Technology, CZ BRN001

Code	Course Title	Dept.	Teacher	ECTS	Hours per week	Semester
ST1	Studio - FREE ASSIGNMENT I	FA		16	8	winter
Studio assignment for Winter term. Creative studio work is the main and essential means of teaching architecture. It is based on the "learning by doing" method, i.e. gaining knowledge and skills by practical application. It consists in the dialogue of the teacher with the student over a project that is being developed. Architectural design of a construction and its local relationships; the solution is documented by the respective annexes, according to the assignment – situation plan, views, sections, model, technical report, or, possibly, the analytical and the design part of an urban planning study. The structural solution is individual according to the assignment.						
ST2	Studio - FREE ASSIGNMENT II	FA		16	8	summer
Studio assignment for Summer term. Creative studio work is the main and essential means of teaching architecture. It is based on the "learning by doing" method, i.e. gaining knowledge and skills by practical application. It consists in the dialogue of the teacher with the student over a project that is being developed. Architectural design of a construction and its local relationships; the solution is documented by the respective annexes, according to the assignment – situation plan, views, sections, model, technical report, or, possibly, the analytical and the design part of an urban planning study. The structural solution is individual according to the assignment.						
1M6	Contemporary Architecture	UN2	Vrabelová Renata, Ing. arch.	2	2	winter or summer
The aim of this subject is to make students acquainted with the contemporary Czech architectural scene, to provide review of contemporary Czech architecture, introduction to historical context, its roots, origins of contemporary creation and the historical reflection.						
2M6	Management and valorize of cultural heritage	UN6	Zemánková Helena, prof. Ing. arch., CSc.	2	2	winter or summer
The course considers cities of tomorrow, their identity and cultural heritage and its protection, renovation and new utilization, as well as the Industrialization Era. The current situation of industrial heritage, abandoned factories, new owners, temporary usage, dangers are also discussed, along with the conversion of industrial heritage as a part of the development of heritage.						
3M6	Development planning of the city and region	UT	Wittmann Maxmilián, doc. Ing. arch., Ph.D.	2	2	winter or summer
Students learn theoretical principles and rules of planning cities and regions with a focus on functional, operational and spatial composition, in addition to planning cities and regions and basic theoretical training.						
UTP	Urbanism V - Territorial Planning	UT	Wittmann Maxmilián, doc. Ing. arch., Ph.D.	4	2	winter or summer
The subject "Formation of Urban and Landscape Environments" is a continuation of the preceding fundamental urbanism studies, covering primarily functional relationships at the level of the individual urban elements and the urban development concept. The course deals with the interpretation and formation of the urban and rural environments. Detailed analyses are made of the historical principles of spatial organization and their applicability to the modern city (composition, problems of new forms, etc.). A second series of lectures and tutorials is devoted to the fundamentals of garden design and to the influence of historic development on today's design. The course also covers the natural environment of settlements and the rehabilitation and protection of the landscape.						

EURK	Urban Composition	UT	Wittmann Maxmilián, doc. Ing. arch., Ph.D.	3	2	winter or summer
The course "Urban composition" resumes the preceding courses covering along with urban structure development also the functional, operational and space relationships of the urban elements, and the urban structure. The subject deals with the urban structure composition at various measures levels and is focused also on the interpretation and formation of the urban environment. Analysed are in detail the principles of spatial organisation and their applicability to the modern city. A part of classes and tutorials is devoted to the fundamentals of garden design and to the regulars of city greenery formation. The subject covers also the development problems of the settlements natural environment.						
6X8	Conversion of buildings	UN4	Zemánková Helena, prof. Ing. arch., CSc.	2	2	winter or summer
The course focuses on assessing industrial heritage and finding ways for its renewal, preservation and new utilization. This subject is also open to foreign students who speak English or French.						
ARC	Architecture of 20th Century	UT	Šlapeta Vladimír, prof. Ing. arch., DrSc.	3	2	summer
In selected chapters is explained the architecture history of 20th century in Bohemia, Moravia, Silesia, Central Europe and worldwide in connection with the development of styles and tendencies, explaining also crucial role of leading personalities of modern architecture.						
ZAA	Landscape Architecture	UT	Wittmann Maxmilián, doc. Ing. arch., Ph.D.	3	2	winter or summer
The optional subject "Landscape architecture" resumes the basic disciplines dealing with the functional, organizational and spatial relationships at the level of the city and its parts. In classes and tutorials the students get acquainted with the past and present of landscape and garden art, with the interpretation of this discipline in its relation to urban design and architecture. Of great importance for the practice of an architect and urban designer are the properties of the plant material and its use in a landscape design. Emphasis is also put on the principles and rules of planning, making and maintaining green spaces. In classes and tutorials students get acquainted with the best examples of implemented garden architecture, reconstructed gardens and parks and newly established green areas.						
SCA	Structural calculations 1	US	Žabičková Ivana, doc. Ing., CSc.	2	2	winter
Students learn main principles of structural design and simple static calculations of particular construction elements according to the European standards. Students can choose structural material - steel, timber or masonry. For entry to the course it is necessary to know basic principles of structural mechanics.						
SCA	Structural calculations 2	US	Žabičková Ivana, doc. Ing., CSc.	2	2	summer
Students learn main principles of structural design and simple static calculations of particular construction elements according to the European standards. Students can choose structural material - steel, timber or masonry. For entry to the course it is necessary to know basic principles of structural mechanics.						
BUS	Building structures, Environment and Energy	US	Suchánek Petr, Ing., Ph.D.	2	2	summer
The course is divided into four main blocks dealing with environment and structural properties of buildings - Thermal Insulation and Energy, Acoustics and Lighting. Block 1 deals with thermal properties of structures, buildings and is aimed to a final energy assesment of a designed building. Block 2 is aimed to technical equipment of buildings - heating and water preparation systems with choice of alternative source of energy. Block 3 deals with acoustic properties of structures and buildings and aims to complete design of a space for cultural purposes. Block 4 deals with lighting and design of lighting systems.						

BSA	Basic Structures for Architects	US	Petříčková Monika, Ing., Ph.D.	2	2	summer
<p>Acquaints the students with the theoretical foundations of structural mechanics, the understanding of which leads to the knowledge of static action of and strain in the supporting elements of building structures. For an architect, the knowledge of the fundamental laws of structural mechanics is indispensable, since it is the modern logic basis of the most important stage of his work, i.e. the formulation of the concept. The subject is conceived in the spirit of the common principles of structural analysis, completed with examples of practical application.</p> <ol style="list-style-type: none"> 1. Tasks of structural mechanics, basic conceptions, presumptions. Plane systems of forces. Equilibrium and equivalence. 2. Basic types of statically determinate beams. Calculation model of planar beam, load actions, supports. 3. Calculation of support reactions. Components of internal forces, differential equilibrium conditions, internal forces diagrams. Solution of basic types of planar beams - simply supported beam and cantilever. 4. Cross-section characteristics of the planar figures. 6. Planar trusses. Calculation model, static definiteness, noncorrect cases. Method of joints and method of sections. 8. Basic principles of the theory of elasticity. Deflection, strain, stress. Linear behaviour, material laws, working diagram. The relation between internal forces and the stresses. Simple tension - stress, strain, deflection. 9. Simple shear. Simple bending. Normal stress produced by bending. Design and check of bent girders. 10. The deflection of the bent bars. The differential equation of the deformation line. The methods of solution of the deformation line. 11. Shearing stress in a bent beam. The centre of the shear. Shearing stress in the thin-walled girders. The influence of the shear on the deflection of the beam. 12. Buckling strengths and the stability of the compressed bars. The check of the buckling bars. 13. The principal stress. 						
VE2	Computer Technology II - 2D modelling	UN1	Foretník Jan, Ing. arch.	4	2	winter or summer
<p>The course provides basic information in the field of graphic vector editors and their use in architectural design. It covers the fundamentals of 2D computer graphics and the practical use of the theoretical knowledge at work with vector editor AutoCAD 2010.</p>						
RHE	Rhinoceros	UN1	Foretník Jan, Ing. arch.	4	2	winter or summer
<p>The subject will learn students to manage 3D modelling (advanced NURBS volume modelling) and basics of visualisation in Computer Aided Design. Rhinoceros 4.0 will be used in the course to reach this goal.</p>						
EFC	Effective communication 1	US	Lojda Jan, doc. Ing., CSc.	2	2	winter
<p>Developing students' skills in leadership, managing successful discussions and negotiation, the course focuses on presentations, rhetoric and principles of public relations.</p> <ul style="list-style-type: none"> - principles of communication - importance of personal development - how to be convincing - objectives of communication - identification of partner in communication - negotiation - argumentation - work with complaining - leasing successful entertainment (win – win strategy etc.) 						

EFC	Effective communication 2	US	Lojda Jan, doc. Ing., CSc.	2	2	summer
FOLLOW-UP COURSE FOR STUDENTS WHO ATTENDED THE COURSE OF WINTER SEMESTER Developing students' skills in leadership, managing successful discussions and negotiation, the course focuses on presentations, rhetoric and principles of public relations. - definition of audience - preparatory of presentation - structuring of message - body language and voice - managing nervousity - managing presentation – work with big groups - calculation of presentations - objective achievement measuring - feedback from presentation						
MFA	Marketing for Architects 1	US	Lojda Jan, doc. Ing., CSc.	2	2	winter
The aim of the course is to acquaint the students with the principles of customer relations and to help them understand the significance of marketing practice for their own freelance activities. - marketing aims - components of marketing - 4 P (8 P) in magementing - marketing plan - marketing communication - marketing strategies - pricing - branche description - competitors description - typical client description Preparatory of set of small minicases marketing topics						
MFA	Marketing for Architects 2	US	Lojda Jan, doc. Ing., CSc.	2	2	summer
FOLLOW-UP COURSE FOR STUDENTS WHO ATTENDED THE COURSE OF WINTER SEMESTER The aim of the course is to acquaint the students with the principles of customer relations and to help them understand the significance of marketing practice for their own freelance activities. - marketing strategy of the SME - internal and external marketing communication - recovery strategy - strategy of the blue ocean Preparatory of individual marketing plan						
MME	Basic Management for Architects 1	US	Lojda Jan, doc. Ing., CSc.	2	2	winter
The aim of the course is to acquaint the students with the most frequently used techniques of business management and to teach the students to use them in daily life. - history of management theory - approaches to management - quantitative mehods in management - management technics at all - management communication at all - motivation skills - delegation skills - leadership - leading of meetings						

MME	Basic Management for Architects 2	US	Lojda Jan, doc. Ing., CSc.	2	2	summer
<p>FOLLOW-UP COURSE FOR STUDENTS WHO ATTENDED THE COURSE OF WINTER SEMESTER The aim of the course is to acquaint the students with the most frequently used techniques of business management and to teach the students to use them in daily life.</p> <ul style="list-style-type: none"> - strategic management - portfolio management - porter's five forces - management of change - management of stocks - management of renewal 						
PMA	Project management 1	FA	Lojda Jan, doc. Ing., CSc.	2	2	winter
<p>The course deals with the general problems of project management. The following topics are discussed:</p> <ul style="list-style-type: none"> - Aims of project management - Structure of project management - Components of the project management. - Preparatory of the PM - Financial resources - Staff resources and recruitment - Negotiation about the project - Monitoring, reporting and feedback on the project - Risk management - Contract management - Configuration management 						
PMA	Project management 2	FA	Lojda Jan, doc. Ing., CSc.	2	2	summer
<p>FOLLOW-UP COURSE FOR STUDENTS WHO ATTENDED THE COURSE OF WINTER SEMESTER The course deals with the general problems of project management. The following topics are discussed:</p> <ul style="list-style-type: none"> - Different types of Projects - International projects - In-company projects - Public funding - PM defending - Problems of reporting <p>Writing own project and its defense in group</p>						
FIG1	Figural Drawing	UZ	Šebánek Jan, Mgr.	2	2	winter or summer
<p>Evolution cartoon skill and knowledge in application on figure drawing</p>						
VT9	Art - Drawing I	UZ	Navrátil Aleš, Ing. arch., Ph.D.	2	2	winter
<p>Drawing and the effort to grasp its potential. The significance of drawing as a means of interpretation and analysis of the space and object seen. Getting acquainted with the tools of drawing and checking the expressive potential of its correct mastering. Drawing treatment of an area and its optical alteration by a parallel line. Ability to create illusion of the third dimension in a plane. Drawing of a simple geometrical space and of the volume of bodies of which it consists. Mastering of perspective positioning of objects towards the viewer. Drawing of architectural space constrained by two planes, and its qualitative analysis by a drawing. Knowledge of the laws of linear perspective and of the relation of the depicted space to its plan.</p>						

VT8	Art - Colour	UZ	Navrátil Aleš, Ing. arch., Ph.D.	2	2	summer
<p>The work in this subject is divided in three phases. In the first phase it is important to come up – to create a strong drawing of spatial (architectonic) structure which is not strain by any conditions of realization. The drawing is very free and based only on the conditions of the structure. It has to be well arranged, transparent, not overburdened by any extra elements. In the second phase this drawing serves as base for making overprint painting, monotype, painted on the glass and placed on this exact drawing. Monotype allows searching for the colourful variations in the framework of the drawing and in the same time it can liberate it till the abstract form in which it serves only as a free guideline. The last phase has its base on chosen overprint painting or only on its part which is transformed by scanning or photographing into the digital form and then with the computer it is adjust to the artistically strong large size (A0) poster. The poster includes integration of each phases its structure (drawings and prints). The phase of printing can be individually different. It is possible to make the drawing on the sheet metal and the painting sample under the bigger pressure in the press. Transform the drawing into the press matrix and change press colours on the specific base etc. Unfortunately the most of the needed materials, except the paper, students have to reimburse themselves.</p>						
VT10	Art - Drawing II	UZ	Navrátil Aleš, Ing. arch., Ph.D.	2	2	summer
<p>Drawing and the effort to grasp its potential. Understanding of the significance of drawing as a means of interpretation and analysis of the space and object seen. Getting acquainted with the tools of drawing, and checking the expressive potential of its correct mastering. Drawing treatment of a simple geometric space and of the volumes of bodies of which it consists. Perspective positioning of objects towards the viewer, and its correct mastering.</p> <p>Analysis by drawing of an architectural space and of the geometric volume of bones. Proportional analysis and building of the human figure by drawing, in its successive steps - skull - whole skeleton - head - detail - whole figure. The drawing of a figure after a model, with view to its architectonics. Building of an architectural space after one's own idea, and analysis of its quality.</p>						

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